9

Teaching Students with Autism Spectrum Disorders

PROGRAMMING
FOR STUDENTS
WITH
SPECIAL NEEDS
SERIES

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This resource is intended for:

Teachers	✓
Administrators	✓
Parents	
Stakeholders	
Others	

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Introduction to the Series

The following books are included in the *Programming for Students with Special Needs* series. The information in each book is interrelated and can be used to provide instruction to all students.

Book 1: Teaching for Student Differences (1995)

Book 1 highlights strategies for differentiating instruction within the regular classroom for students who may be experiencing learning or behavioural difficulties, or who may be gifted and talented. It includes ideas for varying instructional time, the learning environment, resources, materials, presentation, assignments and assessments to accommodate students with diverse needs. This book contains instructional strategies arranged by core subjects as well as by categories of differences, e.g., learning disabilities, behaviour disorders, and gifted and talented. The appendices contain a variety of useful forms for teacher planning.

Book 2: Essential and Supportive Skills for Students with Developmental Disabilities (1995)

Book 2 includes:

- developmental checklists for communication skills, e.g., receptive, expressive, social, articulation and vocabulary
- checklists for gross and fine motor development, including colouring, graphics, manuscript printing and cutting
- charts and checklists which provide a continuum of life skills by domain
- checklists for mathematics, reading and writing to Grade 6
- an annotated list of teaching resources.

Book 3: Individualized Program Plans (1995)

Book 3 contains a process for IPP development and strategies for involving parents. This book provides information on writing long-term goals and short-term objectives along with case studies and samples of completed IPPs. It addresses transition planning, and features forms and checklists to assist in planning.

Book 4: Teaching Students who are Deaf or Hard of Hearing (1995)

Book 4 includes information on the nature of hearing loss and various communication systems. The book contains information on amplification, educational technologies, program planning and teaching strategies.

Book 5: Teaching Students with Visual Impairments (1996)

Book 5 offers basic information to help provide successful school experiences for students who are blind or visually impaired. The information in this book addresses:

- the nature of visual impairment
- educational implications
- specific needs
- instructional strategies
- the importance of orientation and mobility instruction
- the use of technology.

Book 6: Teaching Students with Learning Disabilities (1996)

Book 6 provides practical strategies for regular classroom and special education teachers. Section I discusses the conceptual model and applications of the domain model. Section II includes identification and program planning, addressing early identification, assessment, learning styles and long-range planning. Section III contains practical strategies within specific domains, including metacognitive, information processing, communication, academic and social/adaptive. Section IV addresses other learning difficulties including attention-deficit/hyperactivity disorder and fetal alcohol syndrome/possible prenatal alcohol-related effects. The appendices contain lists of annotated resources, test inventories, support network contacts and blackline masters.

Book 7: Teaching Students who are Gifted and Talented (2000)

Book 7 provides practical strategies for regular classroom and special education teachers. Section I addresses administration of programs for the gifted and talented at both the district and school levels. Section II discusses conceptions of giftedness, highlighting nine theoretical models. Section III discusses identification of gifted and talented students, including information on gathering and recording data using several different measures, developing individualized program plans, communicating with and involving parents. Section IV discusses giftedness in the visual and performing arts. Section V contains strategies for designing and implementing programs, including curriculum modification. Section VI discusses post modernism and gifted education. The appendices contain lists of annotated resources, test inventories, support network contacts and blackline masters.

Book 8: Teaching Students with Emotional Disorders and/or Mental Illnesses (2000)

Book 8 takes a comprehensive look at six emotional disorders or mental illnesses: eating disorders, anxiety disorders, depression, schizophrenia, oppositional defiant disorder and conduct disorder. It describes the characteristics, symptoms and risk factors that may trigger the onset of the disorder or illness, and presents strategies for teachers, parents and other caregivers to use to assist students.

Note:

Children and Students

In Alberta, the *School Act* draws a distinction between children and students. In general, the term "student" refers to an individual who at September 1 in a year is 6 years of age or older and younger than 19 years of age. A "child" refers to an individual who is younger than 6 as of September 1 of the year the child enters an educational program. In Alberta, children with severe disabilities may be eligible for special education programming at 2 ½ years at September 1.

The information, approaches and strategies included in this resource have wide applicability and are generally appropriate for both children and students. For the sake of readability, the term "student" will be used throughout this resource to refer to both children and students who are eligible for special education programming.

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Chapter 1: What are Autism Spectrum Disorders?

Autism spectrum disorders are lifelong developmental disabilities that can impact how people understand what they see, hear and otherwise sense. This can result in difficulties with social relationships, communication and behaviour.

The *Diagnostic and Statistical Manual of Mental Disorders*, DSM-IV (American Psychiatric Association, 1994) defines autism spectrum disorders as pervasive developmental disorders characterized by:

- qualitative impairment in social interaction
- qualitative impairment in communication
- restricted, repetitive and stereotypic patterns of behaviour, interests and activities.

It is a complex neurological disorder that affects the functioning of the brain.

Autism spectrum disorders symptoms can be present in a variety of combinations and may accompany other disabilities.[1] Some people with autism spectrum disorders have normal levels of intelligence, while most have some level of intellectual disability, ranging from mild to severe. This range is often referred to as high-functioning autism spectrum disorders to low-functioning autism spectrum disorders.

There is also a range of difficulties in expressive and receptive language and communication. It is estimated that a high proportion of individuals with autism spectrum disorders, up to 50 percent, do not develop functional speech. For those who do, speech may have unusual qualities and limited communicative functions.

All people with autism spectrum disorders display difficulties with social interaction and behaviour, but the extent and type of difficulty varies. Some individuals may be withdrawn, while others may be overly active and approach people in socially-awkward ways. They may demonstrate selective attention, resistance to change, limited interests or obsessive behaviours. They often respond to sensory stimuli in an atypical manner and may exhibit unusual physical behaviours, such as hand flapping, spinning or rocking. They may also use objects in unconventional ways and demonstrate an unusual attachment toward specific objects.

Although people with autism spectrum disorders may share common features, no two individuals share an identical profile. In addition, the pattern and extent of difficulties may change as individuals grow older. There are common characteristics associated with autism spectrum disorders but it is important to combine this information with knowledge of the specific interests, abilities and personality of each individual.

Prevalence

The generally accepted prevalence rate for autism spectrum disorders has been 4–5 in every 10 000 births. However, recent estimates suggest a rate of about 1 in 500 when a broader spectrum of disorders is included.[2] There is a higher prevalence among males. The ratio varies depending on the definition, but studies reveal a male-to-female ratio between 4:1 to 5:1.

Causes

The cause or combination of causes of autism spectrum disorders is not fully known. There is growing evidence that autism spectrum disorders is a genetic condition and that there are likely several different genes involved.[3] The mode of genetic transmission appears complex, and scientists are focusing their work on discovering which genes may be involved and how these genes are affected. So far, it appears that for at least a significant subgroup of people with autism spectrum disorders, there is a genetic susceptibility that differs across families (that is, different genes may be responsible in different families).[4] Early life events, e.g., complications during the pregnancy, and environmental factors are believed to interact with genetic susceptibility.

Autism spectrum disorders are associated with a number of biological causes, however none is unique to the syndrome. For instance, autism spectrum disorders has been associated with prenatal exposure to rubella, chromosomal abnormalities, such as Fragile X, as well as brain abnormalities, such as hydrocephalus. Many consider autism spectrum disorders to be a "final common pathway" as there are many different possible causes.

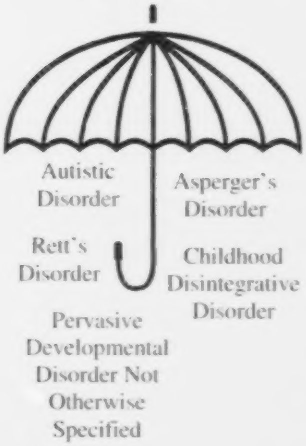
Recently, various types of investigations, including imaging studies, electro-encephalographic studies, tissue studies on autopsy samples and neuro-chemical studies, have provided further evidence of a biological basis for autism spectrum disorders. The brains of individuals with autism spectrum disorders appear to have structural and functional differences from the brains of other people. Anomalies in the brain stem and cranial nerves have been *found*. Ongoing research may one day pinpoint the exact genes and other conditions that combine to cause autism spectrum disorders.[5]

Diagnoses

At present, there is no definitive medical test to identify individuals with autism spectrum disorders. The diagnosis is typically made by a pediatrician, child psychiatrist or clinical psychologist with expertise in the area of autism spectrum disorders. Ideally, assessment and diagnosis involve a multidisciplinary team that includes a pediatrician or psychiatrist, a psychologist and a speech-language pathologist. The psychologist often administers assessments to gather information about development and behaviour, and the speech-language pathologist assesses speech, language and communicative behaviours. A medical assessment is conducted to rule out other possible causes for the symptoms, as many of the characteristics associated with autism spectrum disorders are also present in other disorders. A medical and developmental history is taken through discussion with parents. This information is combined with the other assessments to provide an overall picture and rule out other contributing factors.

Professionals diagnose autism spectrum disorders through the presence or absence of certain behaviours, characteristic symptoms and developmental delays. The criteria are outlined in the *DSM-IV* and the *International Classification of Diseases* (World Health Organization, 1993).

Pervasive Developmental Disorders


Autistic Disorder
Asperger's Disorder
Rett's Disorder
Childhood Disintegrative Disorder
Pervasive Developmental Disorder Not Otherwise Specified

The *DSM-IV* classifies autism spectrum disorders as a disorder within a broader group of Pervasive Developmental Disorders (PDD). PDD is an umbrella term for disorders that involve impairments in reciprocal social interaction skills and communication skills, and the presence of stereotypical behaviours, interests and activities. The conditions classified as PDD in the *DSM-IV* are:

- Autistic Disorder
- Asperger's Disorder
- Rett's Disorder
- Childhood Disintegrative Disorder (CDD)
- Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS).

Some of these diagnostic terms appear to be used interchangeably within the literature and by practitioners. The term Autism Spectrum Disorders (ASD) is sometimes used to refer to autism and other conditions included within the PDD classification. PDD is sometimes used to refer to all conditions within the category of PDD, and at other times is used to refer to PDD-NOS. When people from different disciplines are working together to support students it is important to clarify the use of terminology.

The *DSM-IV* criteria for autism spectrum disorders are included below.

Criteria for autistic disorder in the *DSM-IV* (299.00)[6]

A. A total of at least six items from (1), (2) and (3), with at least two from (1), and one from (2) and (3):

   (1) Qualitative impairment in social interaction, as manifested by at least two of the following:

      (a) Marked impairment in the use of multiple nonverbal behaviours such as eye-to-eye gaze, facial expression, body postures and gestures to regulate social interaction

      (b) Failure to develop peer relationships appropriate to developmental level

      (c) Markedly impaired expression of pleasure in other people's happiness

      (d) Lack of social or emotional reciprocity.

   (2) Qualitative impairments in communication as manifested by at least one of the following:

      (a) Delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gestures or mime)

      (b) In individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others

      (c) Stereotyped and repetitive use of language or idiosyncratic language

      (d) Lack of varied spontaneous make-believe play or social imitative play appropriate to developmental level.

   (3) Restricted repetitive and stereotyped patterns of behaviour, interests and activities, as manifested by as least one of the following:

      (a) Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus

(b) Apparently compulsive adherence to specific nonfunctional routines or rituals

(c) Stereotyped and repetitive motor mannerisms, e.g., hand or finger flapping or twisting, or complex whole-body movements

(d) Persistent preoccupation with parts of objects.

B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age three years:

(1) social interaction

(2) language as used in social communication

(3) symbolic or imaginative play.

C. Not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder.

Other Pervasive Developmental Disorders

The diagnostic category known as Pervasive Developmental Disorders includes: Autistic Disorder, Asperger's Disorder, Rett's Disorder, Childhood Disintegrative Disorder and Pervasive Developmental Disorder Not Otherwise Specified. All of these disorders share common features. However, there are differences in some areas, such as the number of symptoms, age of onset, developmental pattern and level of cognitive functioning.

The *DSM-IV* uses the term Asperger's Disorder. This resource guide uses the term Asperger's syndrome, which is consistent with current literature in the area.

Asperger's syndrome

Asperger's syndrome shares many of the features of autism spectrum disorders. People with Asperger's syndrome demonstrate significant difficulties with respect to social interaction. They also tend to display stereotypical behaviour patterns. Chapter 9 of this resource contains specific information about the characteristics of students with Asperger's syndrome and suggested classroom strategies.

For more information on Asperger's syndrome, see pages 133–138.

The main differences between people with autism spectrum disorders and those with Asperger's syndrome is that individuals with Asperger's syndrome do not have clinically significant delays in early language development or significant delays in cognitive development. They usually do not have the same degree of difficulty as those with autism spectrum disorders in the development of age-appropriate self-help skills, adaptive behaviour and curiosity about the environment in childhood.

Rett's Disorder

Rett's Disorder occurs only in females and is characterized by the development of significant deficits following a period of at least five months of normal development. Children with Rett's Disorder tend to display repetitive hand wringing movements and often have difficulty using their hands in a purposeful manner. In addition, there tends to be deceleration of head growth and motor coordination issues. As with all Autism Spectrum Disorders, children with Rett's Disorder display severe communication and social interaction impairments. Rett's Disorder is much less common than Autistic Disorder.

Childhood Disintegrative Disorder

Childhood Disintegrative Disorder is characterized by regression in multiple areas, e.g., expressive/receptive language, social skills, adaptive behaviour, play skills, motor skills, and/or bowel/bladder control, following a period of at least two years of normal development. Individuals with Childhood Disintegrative Disorder also have significant communication deficits, social interaction impairments, and restricted, repetitive and stereotyped behaviours and interests. This disorder is also referred to as Heller's Syndrome and is much less common than Autistic Disorder.

Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS)

Individuals diagnosed with PDD-NOS have symptoms that are similar to, but not identical to, those displayed by people with autism spectrum disorders. Many individuals with PDD-NOS are not diagnosed with autism spectrum disorders because their symptoms developed later than the diagnostic criteria stipulate or because they display symptoms that are not outlined in the diagnostic criteria. People who display significant social or communication impairments, or stereotyped behaviours or interests, but who do not meet the criteria for any other Pervasive Developmental Disorder, are generally diagnosed with PDD-NOS.

Autism Spectrum Disorders: Myths

The following are common myths about autism spectrum disorders.

Myth #1: All individuals with autism spectrum disorders avoid eye contact and social contact.

People with autism spectrum disorders are a diverse group, so it is difficult to use words such as "all" or "every" when describing those with the syndrome. Although social difficulties are a hallmark of the disorder, many individuals with autism spectrum disorders display some level of social interest and make some attempt to initiate social interactions on a frequent basis. Many individuals with autism spectrum disorders display affection and demonstrate a preference for social activities over solitary pursuits.

Myth #2: People with autism spectrum disorders possess extraordinary skills or talents, e.g., are able to memorize facts, complete complex mental calculations or compose music.

The vast majority of people diagnosed with autism spectrum disorders do not possess genius abilities like the character depicted in the popular movie *Rainman*. However, most individuals with autism spectrum disorders display uneven or scattered skill development. As a result, some skills may stand out in relation to other skills.

Myth #3: Autism spectrum disorders are caused by cold, distant parenting.

Although questions remain about the causes of autism spectrum disorders, it has been empirically demonstrated that parents of children diagnosed with autism spectrum disorders do not differ from parents of typical children. It is now generally accepted that autism spectrum disorders is neurological in origin and that children are born with the syndrome.

Chapter 2: Characteristics Associated with Autism Spectrum Disorders

Although every person with autism spectrum disorders is unique, some characteristics are considered to be particularly important in the diagnosis of autism spectrum disorders. These fall into four major categories:

- communication characteristics
- social interaction characteristics
- unusual/challenging behaviour characteristics
- learning characteristics.

Other characteristics of individuals with autism spectrum disorders include:

- unusual patterns of attention
- unusual responses to sensory stimuli
- anxiety.

Communication

All people with autism spectrum disorders experience language and communication difficulties, although there are considerable differences in language ability among individuals. Some individuals are nonverbal while others have extensive language with deficits in the social use of language. People with autism spectrum disorders may seem caught up in a private world in which communication is unimportant. This is not an intentional action but rather an inability to communicate.

Language difficulties include:[7]

- difficulties with nonverbal communication:
  - inappropriate facial expressions
  - unusual use of gestures
  - lack of eye contact
  - strange body postures
  - lack of mutual or shared focus of attention
- delay in or lack of expressive language skills
- significant differences in oral language, for those who do develop language:
  - odd pitch or intonation

  - faster or slower rate of speech than normal
  - unusual rhythm or stress
  - monotone or lilting voice quality
- a tendency to use language to have needs met, rather than for social purposes
- repetitive and idiosyncratic speech patterns
- echolalic speech, immediate or delayed literal repetition of the speech of others:
  - appears to be nonmeaningful, but may indicate an attempt to communicate
  - indicates the ability to produce speech and imitate
  - may serve a communication or cognitive purpose for the student[8]
- restricted vocabulary:
  - dominated by nouns
  - often confined to requests or rejections to regulate one's physical environment
  - limited in social functions
- tendency to perseverate on a topic—that is, to continually discuss one topic and have difficulty changing topics
- difficulty with the pragmatics of conversation:
  - problems initiating communication
  - difficulty using unwritten rules
  - inability to maintain conversation on a topic
  - inappropriate interrupting
  - inflexibility in style of conversation, stereotypic style of speaking.

> *"The student may be using echolalic utterances to rehearse what is heard in order to process the information, or as a strategy for self-regulation."*
>
> Prizant and Duchan, 1981

Students with autism spectrum disorders often have difficulty comprehending verbal information, following long verbal instructions and remembering a sequence of instructions. The comprehension of language may be context-specific. The extent of difficulty varies among individuals, but even those who have normal intelligence, usually referred to as high-functioning, may have difficulty comprehending verbal information.

Implications for instruction

Programs for students with autism spectrum disorders and other Pervasive Developmental Disorders include comprehensive communication assessment and intervention. This involves assessment by a speech-language pathologist as well as informal observation and classroom-based evaluation. Assessment serves as the basis for identifying goals and strategies for facilitating development of receptive and expressive language skills, particularly pragmatic skills.

For more on strategies to facilitate the development of communication skills, see pages 60–68.

Instruction should emphasize:

- paying attention
- imitating
- comprehension of common words and instructions
- using language for social reasons and not just to have basic needs met
- functional communication.

Communication goals should emphasize the functional use of language and communication in various settings.

Social Interaction

> *"One must separate the variables of social interaction problems from emotions. People with autism desire emotional contact with other people but they are stymied by complex social interaction."*
>
> Grandin, 1995

Students with autism spectrum disorders demonstrate qualitative differences in social interaction, and often have difficulty establishing and maintaining relationships. They may have limited social interactions or a rigid way of interacting with others. These difficulties are not a lack of interest or unwillingness to interact with others but rather an inability to distill social information from the social interaction and use appropriate communication skills to respond.[9]

Understanding social situations requires language processing and nonverbal communication, which are often areas of deficit for people with autism spectrum disorders. They may not notice important social cues, e.g., tone of voice, facial expressions. They tend to have difficulty using nonverbal behaviours and gestures in social interaction, e.g., eye contact, body posture, and they may have difficulty reading the nonverbal behaviour of others.[10]

Students with autism spectrum disorders often are not able to understand the perspectives of others, or even understand that other people have perspectives that could be different from their own.[11] They may also have difficulty understanding their own, and other people's, beliefs, desires, intentions, knowledge and perceptions. They may have problems understanding the connection between mental states and actions. For example, children with autism spectrum disorders may not be able to understand that another child is sad, even if that child is crying, because they are not themselves sad at that particular moment.

Students with autism spectrum disorders have a tendency to play with toys and objects in unusual and stereotypical ways. Some may engage in excessive or inappropriate laughing or giggling. Play often lacks the imaginative qualities of social play. Some children with autism spectrum disorders play near others but do not share and take turns, while others may withdraw entirely from social situations.

The quality and quantity of social interaction occurs on a continuum. Social interaction can be classified into three subtypes[12] along this continuum:

- aloof—those who show no observable interest or concern in interacting with other people except for when necessary to satisfy basic personal needs; they may become agitated when in close proximity to others and may reject unsolicited physical or social contact
- passive—those who do not initiate social approaches but will accept initiations from others
- active—those who will approach for social interaction but do so in an unusual and often inappropriate fashion.

Students with autism spectrum disorders may demonstrate social behaviour that fits into more than one subtype.

Implications for instruction

Social skill development is essential for students with autism spectrum disorders and it is a critical component in developing plans for managing challenging behaviours. Many children with autism spectrum disorders develop social interest but do not possess the social skills necessary to successfully initiate or maintain interactions. Students with autism spectrum disorders have difficulty learning social skills incidentally or by simple observation and participation. It is generally necessary to target specific skills for explicit instruction and provide support to encourage students to consistently use them. The following social skills are generally considered to be critical to social success and should be explicitly taught:

- tolerating others in one's work and play space
- imitating the actions and vocalizations of others
- engaging in parallel activities with others
- sharing materials
- taking turns within the context of a familiar activity
- using eye contact to initiate and maintain interactions.

For more on strategies to facilitate the development of social interaction skills, see pages 69–78.

Unusual/Challenging Behaviours

Students with autism spectrum disorders often demonstrate unusual, distinctive behaviours, including:

- restricted range of interests and preoccupation with one specific interest or object
- inflexible adherence to a nonfunctional routine
- stereotypic and repetitive motor mannerisms, such as hand flapping, finger flicking, rocking, spinning, walking on tiptoes, spinning objects
- preoccupation with parts of objects
- fascination with movement, such as the spinning of a fan or turning wheels on toys
- insistence on sameness and resistance to change
- unusual responses to sensory stimuli.

In addition, many students with autism spectrum disorders have challenging behaviours, such as aggression, destruction, screaming, self-injurious behaviours and/or tantrums. Given that most individuals with autism spectrum disorders are not able to effectively communicate their thoughts and desires, it is not surprising that they rely on their behaviour to communicate specific messages. For instance, a student may use aggression or destruction to communicate that a task is too difficult. Alternatively, some students may use these behaviours to avoid activities or manage their anxiety. Teachers need to look below the surface to identify the message a student is trying to communicate.

Implications for instruction

Many of the odd, stereotypical behaviours associated with autism spectrum disorders may be caused by other factors, such as hypersensitivity or hyposensitivity to sensory stimulation, difficulties understanding social situations, difficulties with changes in routine and anxiety. The instructional plan needs to incorporate strategies for:

- expanding students' interests
- developing skills across a variety of functional areas
- helping students monitor their level of arousal or anxiety
- preparing students for planned changes
- facilitating ways to calm down and reduce anxiety.

In planning instruction, teachers need to consider the problematic behaviour and its function for that particular student. Rather than attempting to control or eliminate all changing behaviours, successful teaching strategies often focus on making environmental adaptations to decrease inappropriate behaviours, and/or helping students learn more appropriate behaviours that will serve the same function (a functional approach to challenging behaviour is discussed in detail in Chapter 6).

Learning

Students with autism spectrum disorders have psycho-educational profiles that are characterized by uneven patterns of development. Studies indicate that there may be deficits in many cognitive functions, yet not all are affected. In addition, there may be deficits in complex abilities, yet simpler abilities in the same area may be intact. Current research[13] has identified some of the cognitive features commonly associated with autism spectrum disorders, including:

- deficits in paying attention to relevant cues and information, and attending to multiple cues
- receptive and expressive language impairments, particularly the use of language to express abstract concepts
- deficits in concept formation and abstract reasoning
- impairment in social cognition, including deficits in the capacity to share attention and emotion with others, and understand the feelings of others
- inability to plan, organize and solve problems.

Some students have stronger abilities in the areas of rote memory and visual-spatial tasks than they have in other areas. They may actually excel at visual-spatial tasks, such as putting puzzles together, and perform well at spatial, perceptual and matching tasks. Some may be able to recall simple information but have difficulty recalling more complex information.

> *"When I was a child and a teenager, I thought everybody thought in pictures. I had no idea that my thought processes were different."*
>
> Grandin, 1995

Some students can more easily learn and remember information presented in a visual format, and may have problems learning about things that cannot be thought about in pictures.[14]

Students with autism spectrum disorders may have difficulty comprehending oral and written information, for example, following directions or understanding what they read. Yet some higher-functioning individuals are relatively capable of identifying words, applying phonetic skills and knowing word meanings.

Some students demonstrate strength in certain aspects of speech and language, such as sound production, vocabulary and simple grammatical structures, yet have significant difficulty carrying on a conversation, and using speech for social and interactive purposes. Similarly, a student who is high-functioning may perform numerical computations relatively easily but be unable to solve mathematical problems.

Implications for instruction

These cognitive variations result in patterns of strengths and weaknesses in a student's academic performance, social interaction and behaviour. Development of cognitive skills is usually uneven. Education programs should be based on the unique combination of strengths and needs of individual students. Programs may need to be modified on an ongoing basis to ensure they are appropriate.

For more on visual strategies, see pages 39–40.

Many students with autism spectrum disorders have deficits in attention and language development, problems with concept formation and difficulties with memory for complex information. These characteristics, considered in combination with personal accounts of how individuals with autism spectrum disorders are visually oriented, suggest that visual material should be incorporated in teaching.

Unusual Patterns of Attention

Students with autism spectrum disorders often demonstrate unusual patterns of attention. These difficulties impact communication, social development and the attainment of academic skills.

Students often have difficulty paying attention to relevant cues or information in their environment and may focus their attention on a certain part of the environment, to the exclusion of what is relevant. For example, a student may look at a ball but not at the person to whom the ball is to be thrown. Or a student may notice insignificant details, such as a staple in the corner of a paper but not the information on the paper. This is referred to as stimulus over-selectivity.[15]

Another feature of this disorder is impairment in the capacity to share attention equally between two things or people. This has been referred to as a problem with shared or joint attention. For example, many individuals with autism spectrum disorders make no attempt to draw the attention of others to objects or events that interest them. Similarly, students with autism spectrum disorders often fail to pay attention to objects or events that interest other people.

Students may have difficulty disengaging and shifting attention from one stimulus to the next, which may contribute to characteristic rigidity and resistance to change. They may also demonstrate short attention spans.

Implications for instruction

Difficulties with attention may significantly interfere with students' abilities to develop effective social behaviour and language. For example, students with autism spectrum disorders may respond to irrelevant social cues that have caught their attention, or attend to limited portions of a conversation and not understand the intent of what is being communicated. They may not attend to multiple cues in speech and language, and miss important subtleties of the message.

Information and instructional activities presented to students should be provided in a format that:

- is clear and concise
- is consistent with students' comprehension levels
- focuses their attention
- emphasizes the most relevant information.

Individualized strategies for focusing students' attention can be developed as part of instructional plans. Parents can provide valuable information about their methods of helping their children focus on things they need to learn. Ideally, instructional plans will include helping students eventually manage these strategies themselves.

Unusual Responses to Sensory Stimuli

People with autism spectrum disorders usually differ from others in their sensory experiences. Responses to sensory stimulation may range from hyposensitivity to hypersensitivity. In some cases, one or more of the person's senses is either under-reactive or over-reactive. Environmental stimuli may be disturbing or even painful to individuals with autism spectrum disorders. This may apply to any or all types of sensory input.

Other characteristics associated with autism spectrum disorders may be caused, in part, by a disorder in sensory processing.[16] The extent to which sensory problems contribute to other characteristics associated with autism spectrum disorders is not certain. However, there is sufficient information to suggest that consideration be given to both the type and amount of sensory stimulation in the environment, and the individual's reaction to it.

Tactile system

The tactile system includes the skin and nervous system. Information is gathered by the skin and nervous system through touch, temperature and pressure. This information is interpreted as pain, neutral information or pleasure. The tactile system allows people to perceive and respond appropriately to their environment. People pull away from something that is too hot. They respond with pleasure to the warmth and pressure of a hug.

When people with autism spectrum disorders are affected in the tactile system, they may withdraw when touched or overreact to the texture of objects, clothing or food. This may be the result of tactile misperception, which can lead to behavioural problems, irritability, withdrawal and isolation. Although some sources of stimulation cause avoidance, other types and/or amounts of stimulation may have a calming effect. Some individuals demonstrate a preoccupation with certain tactile experiences and seek out such feedback on a frequent basis, e.g., insisting on touching smooth surfaces.

Auditory system

People with autism spectrum disorders may be hyposensitive or hypersensitive to sounds. Parents and teachers report that seemingly innocuous sounds can cause extreme responses in some children with autism spectrum disorders. This can be particularly problematic in a school setting, which normally includes many different sounds. The scraping of chairs, bells between classes, intercom announcements and other environmental sounds fill a normal school day. Some people with autism spectrum disorders report that such sounds are excruciatingly intense to them. Alternatively, some individuals with autism spectrum disorders fail to respond to certain sounds, e.g., their name being called, the phone ringing.

Visual and olfactory systems

People with autism spectrum disorders may respond differently to sensory stimuli. Some individuals react to odours, such as perfumes and deodorants. Others may use smell to seek out information about the surroundings in unusual ways.

> *"As I walk down the street, I know what everyone is having for dinner by the smells coming from the houses."*
>
> A 14-year-old boy with Asperger's syndrome

Some people with autism spectrum disorders cover their eyes to avoid certain lighting, or in response to reflections or shiny objects. Others seek out shiny objects and look at them for extended periods of time.

Vestibular and proprioceptive systems

The inner ear contains structures that detect movement and changes in position. This is how people can tell that their heads are upright, even with closed eyes. People with autism spectrum disorders may have differences in this vestibular orienting system so that they are fearful of movement and have trouble orienting themselves on stairs or ramps. They may seem strangely fearful or clumsy. The opposite is also true. Individuals may actively seek intense movement that upsets the vestibular system, such as whirling, spinning or other movements that others cannot tolerate.

Through information derived from muscles and other body parts, people automatically know how to move or adjust positions efficiently and smoothly. Some individuals with autism spectrum disorders have problems integrating the body's proprioceptive information, and have odd posture and appear clumsy or sloppy.

Implications for instruction

For more on strategies that can be utilized to address sensory issues, see pages 54–59.

These unpleasant or aversive sensory experiences contribute to some of the inappropriate behaviours students with autism spectrum disorders display.[17] For example, students with severe sensory processing problems may shut down entirely to avoid aversive stimuli or over-stimulation.[18] Tantrums may be related to the desire to escape situations that are over-stimulating. Self-stimulating behaviours may help individuals calm down when stimuli become overwhelming, by generating a self-controlled, repetitive stimulus.[19]

Being aware of the different experiences of sensory stimulation and integration is an important part of understanding the behaviours of students with autism spectrum disorders and planning programs for them.

Anxiety

Anxiety is not specifically identified in the *DSM-IV* criteria for autism spectrum disorders. However, many individuals with autism spectrum disorders, as well as their parents and teachers, identify anxiety as a characteristic associated with the disorder. This anxiety may be caused by a variety of sources, including:

- the inability to express oneself
- difficulties with processing sensory information
- fearing sources of sensory stimulation
- a high need for predictability and difficulty with change and transitions
- difficulty understanding social expectations
- fearing situations because they are not understood.

Implications for instruction

Programming for students with autism spectrum disorders often need to address anxiety and the factors that appear to contribute to it. Changes and adaptations can be made within the environment to reduce anxiety arousing situations, and a variety of strategies can be used to help students manage anxiety and cope with difficult situations. These include:

- providing warnings about upcoming transitions and changes
- providing daily and weekly schedules to increase predictability
- utilizing social scripts to encourage appropriate calming strategies or coping skills
- providing factual information regarding fear or anxiety arousing situations, e.g., what to do when lost
- establishing a calming area within the classroom.

Final Thoughts on Characteristics

The differences in learning characteristics associated with autism spectrum disorders that have been described in this chapter clearly have important implications for instruction across all developmental domains and subject areas. In general, these differences necessitate primary reliance on systematic and explicit (direct) instruction. In essence, students with autism spectrum disorders require a very high level of structure in the presentation of materials, organization of the learning environment and instructional methods. However, while direct instruction should be the primary tool used with students with autism spectrum disorders, it is important for teachers to be flexible in their approach and to change expectations when the situation warrants it. Achieving a balance between the need for carefully planned instruction and flexibility in adapting approaches based on the students' changing needs is the key to a successful program.

Chapter 3: Collaborating with Parents

Developing and implementing effective educational programs that are meaningful for students with autism spectrum disorders involve collaboration with parents. Parents of children with autism spectrum disorders work closely with professionals to obtain diagnoses, early intervention programs and other resources, and are usually knowledgeable about both the disorder and their children. Bringing the experiences and knowledge of parents to the program planning process, serves not only to enhance students' school success, but also creates a climate for ongoing learning, communication and collaboration.

A collaborative parent-school relationship is based on parents and teachers understanding each other's perspectives and realities. It is important for parents to have a clear understanding of their child's school program, the roles of staff members and how individual classrooms meet the diverse needs of all the students.

It is equally important for teachers and school staff to have an understanding of the experiences families go through in living with children with autism spectrum disorders, the interventions they access and the important role that schools play in families' lives. With these understandings and a commitment to collaboration, parents and teachers can work together to create positive and effective educational programs for students.

The Experiences of Families

Each family is unique and has different experiences obtaining a diagnosis, and planning for and adapting to meet the needs of a child with autism spectrum disorders.

Obtaining a diagnosis

Obtaining a diagnosis is often the culmination of a long process that parents undergo searching for an understanding of their child. Prior to seeking professional help, parents notice that their child's development is not progressing as expected and there is something different about the way their child behaves. It is often the family physician who is the first professional contacted. The following are common initial concerns that parents bring to their physicians regarding their child's development.

- The child may appear to have unusual listening patterns. He or she does not seem to respond to language, yet seems to enjoy music. This concern may lead parents to explore whether the child has a hearing impairment.
- The child may seem aloof, make little eye contact and resist attempts to bond with parents. This concern may lead parents to seek advice on how to form a closer attachment to their child.
- The child may have unusual eating and/or sleeping patterns. Many children with autism spectrum disorders are picky eaters and parents are often concerned that they are not getting adequate nutrition. Other children with autism spectrum disorders have difficulty sleeping and are exhausted.
- The child may be slow developing language and communication skills.

Once concerns about a child's development are raised, there are many avenues physicians may take to investigate the issues. Specific diagnostic medical procedures, genetic testing and referral to other professionals, such as speech-language therapists, occupational therapists, physiotherapists and psychologists are often initiated.

While early diagnosis is preferred, there are some children diagnosed in later years. These are children whose early development and behaviour was not conspicuously abnormal. It may be that once such a child entered the school system and was observed over time by a teacher familiar with normal child development, the autistic symptoms were detected. Other children may have had a history of social, language, learning and/or behavioural difficulties and were assumed to have other kinds of disorders, such as attention-deficit/hyperactivity disorder or learning disabilities. However, careful observation over time revealed that the behaviour was more accurately described as an autism spectrum disorder.

Many parents are relieved to discover that there is an explanation for the behaviours their children exhibit. Many parents obtain a diagnosis as a way of determining what support and assistance they can access to best help their children. Although the diagnosis itself may be difficult to accept, the goal for most parents is to access appropriate intervention.[20]

Adjusting to the diagnosis

There are many books, articles and research papers about the stages of acceptance families experience when they learn their children have autism spectrum disorders. Recent research studies indicate that people often experience multiple emotions and reactions that don't necessarily occur in discrete phases. Every family will react differently to the discovery that a child has autism spectrum disorders, and experiences its own unique way of coping and adjusting.

Adjustment often involves accepting the emotions experienced, gathering facts, and helping siblings and other family members understand the disorder. Acceptance occurs as parents learn more about autism spectrum disorders and realize they can take an active role in creating a positive future for their children. Gathering information, meeting other parents of children with autism spectrum disorders, identifying and using professional services, as well as advocating for their children are positive ways that parents can begin to adjust.[21]

Developmental stages and family stresses

All families go through different stages of development as children are born, grow up and eventually move out on their own. Each stage brings new challenges and demands new accommodations. Families of children with autism spectrum disorders often face these challenges more acutely, as they deal with the awareness that their children need different kinds of support and intervention at every stage. Parents often find themselves going through an acceptance cycle with each new phase of development. The transitions from preschool to elementary school from elementary school to junior high and high school, and from high school to the adult world may be particularly challenging.

It is important that educators understand the perspectives and experiences that families bring to the home-school partnership. Many parents have a wealth of knowledge about the disorder, resources and interventions, and an overall understanding of what works for their individual child. Families may be experiencing stress and anxiety about the transition from one education system to another. It is also helpful for teachers to understand that there are other factors, such as family size, cultural background, socioeconomic status and geographic location that affect the degree to which families are able to engage in the school-home partnership. Most parents are motivated to help their children, but vary greatly in how they act on this motivation. Some parents have the time, temperament, educational background or knowledge about autism spectrum disorders to work closely with the school staff. Other parents, although motivated and concerned about their children's development, may not be actively involved in their children's school programs. Educators need to be sensitive to the perspectives and beliefs families bring to the school context.

Collaborating with Parents

Creating a collaborative home-school partnership must be carefully planned, keeping in mind the ultimate goal of working together to best meet the needs of students. Combining the strengths and knowledge of parents who know their children best and have a history of supporting and advocating for their children, with the expertise of teachers, creates a powerful partnership that directly benefits students. Collaboration between home and school can lead to improved academic and social success, positive attitudes and behaviour toward school, better attendance and improved parent-teacher communication.[22]

A collaborative home-school partnership:

- is an informed partnership where both parents and teachers understand the child's realities at home and at school
- uses a team approach to program planning and development
- establishes a clear home-school communication plan.

Build an informed partnership

Being an informed partner in the home-school partnership requires that each participant have background information when beginning the collaboration process. Teachers need a general understanding of the nature of the student's disorder, the student's history, previous interventions and their effectiveness, and specific strengths and areas of growth. It is important for teachers to understand the experiences parents have gone through, and have a global knowledge of the goals, dreams and hopes that they hold for their children.

Parents, in turn, need a thorough understanding of how the school system works, what program options are available and how educational decisions are made at the school.

Establish a team approach

Collaborative partnerships involve a team approach. Programming for and meeting the unique needs of children with autism spectrum disorders involve complex decisions that parents and teachers cannot make in isolation. Team members can include administrators, special education consultants, teachers, teacher

For more on IPP planning, see pages 31–36, and *Individualized Program Plans* (Alberta Education, 1995), Book 3 of the *Programming for Students with Special Needs* series.

assistants, therapists, parents and other community resource personnel. The school-based team is a critical part of the individualized program plan (IPP) process. Together, the team works to set meaningful academic and social goals and objectives, select strategies, develop positive behaviour plans, and devise social programs to enhance peer relationships both at home and at school. The team can also plan and implement programs and inservices to augment parent and teacher knowledge in the field of autism spectrum disorders.

Plan for communication

See Appendix A, page 172, for a sample Home-School Communication Book.

The key to effective collaboration is communication. In order to maximize children's potential, and generalize skills both at home and at school, parents and teachers will need to communicate beyond the traditional parent-teacher interview modes. Parents and teachers need to work together to develop an effective communication plan. This plan should address how teachers and parents will communicate on a regular basis, and how emergent concerns will be handled. The process also includes setting regular meeting times to review IPPs. A variety of communication methods should be considered, including daily diaries, home-school communication books, notes, letters, journals, newsletters and regular phone calls.

Parents often want daily in-depth reporting about their children's learning and behaviour. While meaningful communication between home and school is an essential ingredient for successful collaboration, it is important for teachers not to become overwhelmed with the task of reporting. It is often helpful for teachers and parents to prioritize specific areas to discuss on a daily basis. The communication protocol should be re-examined periodically to ensure that it continues to meet the needs of parents and teachers. (A number of formats for written communication between school and home are provided in the appendices.)

It is important for teachers to identify the amount and type of communication that parents require and to keep in mind that parents need to hear some positive news about their children. Like all parents they appreciate personal messages that recognize their children's achievement and progress.

Facilitate collaborative relationships

Collaborating with parents often involves scheduling meetings for a variety of purposes. These meetings help teachers gain understanding of the child and family, and the supports the family has in place. These meetings provide opportunities to clarify roles, set goals and objectives, and develop strategies and communication plans in order to effectively plan and implement education programs.

Parents may be working with other professionals who have valuable suggestions for education programming and developing behaviour plans. Ask parents who they think should attend meetings to share information and provide ideas for strategies.

Schools may also be able to access professionals within the school division who can contribute to the collaboration and planning process.

Following are some suggestions for planning and conducting meetings with parents.[23]

I. Planning the meeting

1. Determine the purpose of the meeting.

2. Determine the expected outcome of the meeting, e.g., the development of IPP goals, a new behaviour plan, a transition plan.

3. Keeping the purpose of the meeting in mind, determine who should be invited.
    - Consult with the school-based team to determine which school, system or partner agency personnel should be invited.
    - Consult with parents to determine who they believe would be helpful.

4. Decide who should facilitate the meeting. Consider rotating the chair.

5. Schedule the meeting at a time that is convenient for parents and other participants.

6. Identify possible interests of the participants.
    - What is important for you to discuss or resolve at this meeting? Why is this important to you?
    - If you were the parents, what would you be concerned about? Why?
    - What are the concerns of others who may be significantly affected?

7. Consider the relationships involved in the collaboration process.
   - What relationship issues might be interfering with the collaboration process? For example, parents may feel blamed if their children are disruptive in class.
   - What can be done to improve the relationships?

8. Develop an agenda.
   - Start with positives, such as what is working for the child at school and at home, accomplishments, strengths and/or improvements.
   - Use neutral vocabulary in creating the agenda. For example, if the teacher wants to address aggressive behaviour at school, a neutral term would be "behaviour." In the same fashion, if parents want to discuss concerns about the amount of individual assistance their child is receiving, a neutral term to address this could be "support."

II. Conducting a successful collaboration meeting

1. Before participants arrive:
   - arrange the room, chairs, tables, papers
   - review your notes, memorize people's names.

2. Set a positive and encouraging tone for the meeting:
   - welcome participants
   - share the logistics, e.g., washroom locations, parking, time allotted for the meeting
   - introduce participants
   - share the agenda, and make revisions and additions as necessary.

3. Give each participant the opportunity to discuss his or her perspective.
   - Listen carefully to each participant's perspective, accepting the expressions of feelings, attitudes and ideas. Refrain from judging or showing disapproval of their comments.
   - Give positive feedback and encouragement to participants.
   - Clarify the perspectives to ensure you understand what is said.
   - If a participant has a specific request, make sure that you understand the reasons behind the request. For example, parents might request two hours of speech-language therapy a week. Ask clarifying questions,

such as "What do you hope your child will get out of that?". Once you understand the reasons, it is easier to address the request.

4. Expect the same attention and respect for yourself that you give to participants.
    - Balance positive comments with comments about challenges.
    - Describe the child's behaviour rather than making judgements about it.

5. Brainstorm options to address mutual concerns and issues.
    - What skills and resources are available within the school or school system?
    - What community resources are available?
    - What are ways to combine and maximize these skills and resources?

6. Take time at the end of the meeting to summarize the discussion, and review plans for specific and cooperative actions to be taken by both parents and teachers.

7. Establish plans and times for follow-up communication or further meetings.

III. Follow-up and evaluation

1. Review the objectives for the meeting and evaluate whether goals have been met.

2. Consider ways to improve the effectiveness of interactions and jot down ideas in preparation for future meetings.

When collaboration becomes difficult

There are times when in spite of all good intentions, the parent-school partnership becomes difficult and collaboration wanes. When this occurs, it is helpful for educators and parents to work towards understanding each other's perspectives to better determine the barriers to collaboration and ensure that the child will not be negatively impacted.

General principles of mediation can be used to maintain and improve the home-school relationship. Identifying educators' and parents' mutual concerns and goals is a starting point for working together. Too often, parents and teachers become fixed in their positions and lose sight of their goals. When the focus is on the needs of the child, parents and teachers may be able to move beyond fixed positions to work creatively and cooperatively towards solutions.

It is important to be aware of the following types of issues which may contribute to parent-school conflict.[24]

Parents and school personnel may have differing views of children and their needs. Take constructive steps to reach a shared understanding by identifying the underlying needs of parents. Listen to and incorporate parents' perspectives concerning long and short-term goals for their children to help narrow the gap between opposing views. Be cognizant that the language used to describe children takes into account the whole child—abilities, strengths and aspirations, as well as needs.

In some instances, it may be helpful to enlist an objective, mutually acceptable third party to facilitate collaboration. Collaboration will be enhanced when parents and school staff are committed to working together for the best interests of children.

Parents and teachers are the two most powerful influences in children's lives. Working together in a collaborative partnership promotes meaningful and effective learning.

Chapter 4: Planning Support for Students with Autism Spectrum Disorders

Developing Individualized Program Plans (IPPs)

There is considerable variability in how learning and behavioural characteristics affect a particular individual with autism spectrum disorders so programming must be individualized. Knowing how autism spectrum disorders affects students' abilities to process information and communicate are critically important to planning.

Students' educational programming may include a combination of instructional activities from the regular curriculum, as well as activities based on goals and objectives that are unique to the individual and set out in an individualized program plan (IPP).

IPPs are developed through collaboration by a school-based team that includes classroom teachers, parents and students themselves, when appropriate. In some cases, planning involves others, such as teacher assistants, program specialists, speech-language pathologists, occupational therapists, behaviour consultants and school psychologists. School staff need to be aware of the interventions being used to support students outside the school environment, so that school programs can be as congruent as possible with those programs or therapies. In addition to programs or therapies offered through the school, some families access private therapy services. Because students with autism spectrum disorders have difficulty with change, it is important that these supports complement each other.

Contents of individualized program plans

IPPs are flexible working documents that summarize the goals and objectives for student learning during the school year. They are intended to guide the work of educators and provide information on the types of modifications, adaptations, strategies and services that will be used to support students. IPPs do not describe everything that will be taught nor are they written in stone.

For more on integrating planning, see on pages 36–38.

Essential and Supportive Skills for Students with Developmental Disabilities (Alberta Education, 1995), Book 2 of the *Programming for Students with Special Needs* series, provides checklists and information on functional skills within developmental domains.

See Appendix B, pages 173–174, for an example of how to integrate goals in an IPP with regular class activities.

See pages 139–170 for sample IPP documents.

Effective IPPs include the following.

- They contain personal and educational data, including assessment information.
- They contain information about students' strengths and needs.
- They state long-term goals and short-term objectives. Long-term goals describe what students are expected to accomplish within a specified time period. They are based on the prioritized needs of students. Short-term objectives represent the intermediate steps between students' current skills and the projected long-term goals. These short-term objectives can be related to the regular curriculum or developed as individualized objectives and organized into developmental domains, such as communication, socialization, behaviour and functional life skills.
- IPPs include transition goals, such as vocational skills or, in the case of younger students, goals that address the development of independent work skills.
- IPPs contain information about support services that will be used in working toward goals and objectives.
- They state how student progress will be assessed, evaluated and communicated.
- IPPs assign responsibility for carrying out specific aspects of the plan.

IPPs are broad plans that guide the daily instructional activities for students. IPPs may need to be revised throughout the year.

When developing IPPs, it is important to plan adaptations to instruction, classroom environment and classroom management that address the needs of students and enable them to function optimally in the classroom. Communication and social skills are key areas of development for students with autism spectrum disorders and must be addressed in IPPs.

See Appendix C, page 175, for a blank Modification Planning Form.

Roles and Responsibilities

The following school personnel and stakeholders may be involved in developing IPPs, depending on the needs of students and the availability of resources.

Parents—Parents have knowledge and experience that is valuable in developing effective programs. This knowledge is key to answering the fundamental question: What skills are most important for my child to develop in order to enhance his or her life now and in the future? Parents have worked out ways to communicate and manage their children at home that can be transferable to the school setting. When families and schools work together, students benefit from the resulting consistency.

Classroom Teachers—Teachers are responsible for planning and implementing the education programs of all students in their classes. When a student with autism spectrum disorders needs specialized programming and instruction, teachers modify instructional methods and materials, and work collaboratively with available specialists to ensure there is a well-planned, coordinated approach. Teachers should also be aware of parent priorities and expectations.

School Principals—The duties of principals include implementing education programs for all students in the school, assigning staff, allocating resources and ensuring teachers have the information and resources they need to work with students. Principals can facilitate the collaboration of school-based teams in supporting students with special needs and establish procedures for involving parents in the IPP process.

Specialist Teachers—Some districts employ program specialists or specialist teachers. These individuals typically have specialized knowledge and skills in the area of special education. In some cases, specialist teachers may be resource teachers. For some students with autism spectrum disorders, resource teachers provide direct instruction, while in other cases, specialist teachers provide consultative support to classroom teachers. Specialist teachers may also conduct formalized assessments to determine strengths and areas of need.

Teacher Assistants—In some cases, teacher assistants work in classes with students with autism spectrum disorders. Teachers design programs for students with special needs, however teacher assistants play a key role in performing a variety of functions from personal care to assisting with instructional programs. Working under the supervision of teachers or principals, teacher assistants are often involved in shaping appropriate behaviours, developing independent living skills, facilitating interactions with others and stimulating communication. It is critical that the roles of teachers and teacher assistants be clearly defined.

For contact information for regional educational consultation services, see page 193.

Speech-Language Pathologists (SLPs)—Speech-language pathologists have specialized training in assessing communication needs and designing programs to improve communication. Because communication difficulties are a significant problem for students with autism spectrum disorders, SLPs can play a critical role in setting appropriate goals and developing strategies to meet the needs of individual students. The services provided by SLPs may involve direct therapy or be more consultative in nature.

Psychologists—Psychologists bring knowledge and experience regarding child development, behaviour modification and diagnosis/assessment to the team. They often play a critical role in the development of behaviour management plans. A comprehensive psycho-educational assessment can be helpful in determining student strengths and areas of need, levels of functioning, and in identifying individualized goals.

Occupational Therapists—Occupational therapists focus on the development of adaptations, addressing sensory issues and the development of fine motor skills. They often assist in the development of "sensory diets" to address specific arousal or sensory issues that interfere with learning. Occupational therapy also addresses areas that interfere with self-care, play/recreation and/or vocational skills.

Physical Therapists/Adaptive Physical Education Teachers—Physical therapists and adaptive physical education teachers generally focus on the development of gross motor skills and address motor coordination issues. Gross motor issues often have a negative impact on adaptive living skills, recreational skills and/or peer acceptance.

Behaviour Specialists—Behaviour specialists assist in developing and implementing individualized behaviour management plans. This is generally achieved by conducting a functional behavioural analysis, identifying effective motivators, and developing a plan for supporting appropriate behaviours given existing resources and supports.

Strategies to Facilitate Effective IPPs

IPPs are most effective when they are working documents that are consulted and updated regularly. Strategies to facilitate the IPP process are outlined below.

Enhance the collaborative team

- Actively involve parents in the IPP process.
  - Seek parental input prior to IPP conferences, e.g., send home a form seeking information about parent goals, children's preferences.
  - Discuss how and when parents want to be involved in their children's education programs, and how they want to be kept informed.
  - Assist parents in preparing for IPP meetings.

  - Create a draft IPP and invite meaningful input from parents. Make changes and additions with their input.
  - Provide parents with a copy of the IPP to facilitate their support at home and as a working copy to record their observations, questions and ideas.
- Actively involve students in the IPP process and increase participation as students mature.
  - Involve students in setting goals and evaluating progress to increase ownership and motivation.
  - Involve students in IPP conferences, as appropriate.
  - Support students in taking responsibility for describing their needs and seeking appropriate support.
- Involve appropriate school personnel in developing IPPs.
  - All school personnel involved in providing instruction and support for students should be involved in developing IPPs. Classroom teachers are better able to use IPPs as instructional guides when they are involved in their development.
  - IPPs are most effective when viewed in the context of an active problem-solving process.
- Create an organizational structure such as the Student Support Team, to facilitate team planning.
  - Provide professional development and guidance for teachers to increase understanding of the purpose and structure of IPPs.
  - Build in support for the IPP process, e.g., time for involvement, communication, access to additional expertise.

Consider individual needs

- Consider students' academic, cognitive and processing strengths. How can instruction build on strengths?
- Use multiple sources of assessment data to determine strengths and needs.
- Consider students' needs including social, behavioural communication, self-help and academic needs.
- Consider the appropriate balance for individual students. Each student should participate in the regular curriculum as much as possible with accommodations to support success. Students may also need specialized instruction to develop skills and strategies.
- Consider the student's chronological age and developmental level when identifying goals.
- Focus on key goals for the individual student.

- IPPs should be transition-driven. The team should think about the student's immediate and future needs during goal setting.
- To be useful for ongoing instruction and monitoring, IPPs need to be accessible working documents. Some teachers keep them in binders in their desks for planning instruction and noting observations.
- If there are several teachers responsible for a student's education program, it is important to develop procedures for all teachers to have access to the IPP so they can use it to plan instruction, monitor progress, and contribute to evaluating and revising goals and objectives.

Monitor student progress

- Use diverse assessment and evaluation strategies to measure and communicate student progress.
- Monitor progress frequently. If objectives are met, set new ones. If the student is not demonstrating progress, review the program and make changes.
- Use IPPs as working documents. Record, note or attach assessment information.
- Make revisions and additions as required.

Guide transition planning

- Collaborative, comprehensive transition plans should be included in IPPs.

Integrated Case Management

Integrated case management (ICM) is a team approach to assess, structure and monitor the delivery of various services to individual children and their families through a single holistic plan. The approach puts families at the centre and gives them an active voice in developing an action plan and shaping services. This approach relies on multiple perspectives and requires creative and critical thinking skills. It requires ongoing reflection on practice and service delivery.

An integrated case management approach ensures that services for a family are coordinated, proactive and well planned. It ensures people are working towards a common goal, are speaking the same language and using the same process in working with children and families. This team approach avoids gaps in service, ensures that services are not needlessly duplicated and gets the right services working for children and their families. One important advantage of such an approach is that even though individual team members may change over time, the process is continuous and the child and the family always knows some members of the team.

The team is made up of family members, teaching staff and other support people as well as service providers, such as speech pathologists or occupational therapists. The team meets on a regular basis to plan and respond to the needs of the child. To put together a team, identify all those who are involved with the child, including teaching staff, other professionals, agencies and community supports, and who in the family will participate. Identify any other important people who could support the family, such as extended family members, friends and advocates. Discuss issues of confidentiality, expectations, respect for privacy and obtain written consent for the sharing of information.

Participants in integrated case management teams need to demonstrate respect, use effective communication skills, be able to disagree, be committed to working towards common goals, be clear about roles and responsibilities, and respect privacy and confidentiality. The success of the team is dependent on all members participating willingly and to the best of their ability.

Integrated case management meetings should be solution-focused and mirror the IPP process. A team meeting could involve the following steps.

1. Collect information about strengths and concerns.
2. Establish what is most important.
3. Identify the desired outcomes or goals and make them realistic and concrete.
4. State the outcome in positive terms as if it is already happening. For example, Bobby participates in after-school recreational program three days a week.
5. Develop an action plan to achieve these goals. The strategies in the action plan should build on strengths and supports the child and family already have. An effective action plan directs everyone's energies to the same goals and is realistic, concrete and specific.
6. Assign tasks, get commitment and establish timelines.
7. Regularly review and revise the plan to make sure it is working for everyone involved.

Consider the following strategies for effective integrated case management.

- Involve all service providers from the earliest stages of decision making.
- Ensure adequate time to respond to issues and concerns.

- Keep number of participants as low as possible without leaving important players out.
- Start with strengths; deal with the least controversial issues first.
- Gradually increase level of child and family involvement, as they are ready to take on more responsibility.
- Work to eliminate barriers, such as transportation, time and location.

Chapter 5: Classroom Instruction

General Instructional Approaches

Provide visual support

One of the most effective approaches to teaching students with autism spectrum disorders involves the use of visual aids. Students often demonstrate relative strengths in concrete thinking, rote memory and understanding visual-spatial relationships, and difficulties in abstract thinking, social cognition, communication and attention.[25] Pictographic and written cues often help students learn, communicate and develop self-control.

One advantage of visual aids is that students can use them for as long as they need to process information. In contrast, oral information is transient—once said, the message is no longer available. Oral information poses problems for students who have difficulty processing language and who require extra time.[26] It is often difficult for students with autism spectrum disorders to attend to relevant information and block out background stimulation. Using visual supports enables students to focus on the message.

Visual aids and symbols range in complexity from simple and concrete to abstract. The continuum moves from real object or situation, to facsimile, colour photograph, colour picture, black and white picture, line drawing, and finally to graphic symbol and written language. Objects are the most simple, concrete form of aid. Graphic symbols, although far along the continuum in terms of complexity and abstraction, have been used successfully with many students with autism spectrum disorders.

Software packages that provide quick access to graphic symbols and the ability to create customized symbols are available. Currently, the most widely used software packages are Boardmaker and Writing with Symbols 2000. Both are distributed by Mayer-Johnson Inc. (www.mayer-johnson.com). Boardmaker is a graphics database that contains over 3000 Picture Communication Symbols in clip art form. Writing with Symbols 2000 is a word processing program that automatically creates visuals to correspond to each of the words typed. Visual images can also be downloaded from Linda Hodgdon's Web site (www.usevisualstrategies.com).

Visual supports can be used in a variety of ways in the classroom. However, to be successful, they must fit a student's level of comprehension.

For example, if a student has a significant cognitive delay, it may be appropriate to outline the steps involved in a specific task using photographs of the student engaged in the task. For higher functioning students, it may be more appropriate to outline the task steps using line drawings or words.

Visual supports can be used to:[27]
- depict scheduled tasks and activities
- encourage independence
- facilitate organization
- teach social skills
- promote communication
- encourage appropriate behaviour
- make expectations clear
- depict choices.

Structure the environment and instructional tasks

Increasing the level of structure is a basic principle underlying all successful approaches with students with autism spectrum disorders. Later, this resource will outline a number of highly structured instructional approaches. However, it is also important to consider the use of structure in the organization of the physical environment and in the design of specific activities.

The physical environment of the classroom can be structured by:

- Establishing specific areas that are associated with certain kinds of activities (e.g., quiet work area, group work area, consistent area for snack, etc.). Rugs, taped lines and signs can be used to create physical markers to separate instructional areas.
- Clearly mark materials and store in an organized fashion.
- Cover or screen desirable activities and/or objects when they are not available to the student.
- Mark the student's storage areas with his/her photo or some other easily recognizable cue.
- Use different coloured folders, binders or bins for different subject areas or tasks.
- Create "start" and "finished" boxes, bins or folders for the student's independent work.

- Store all materials for a specific task together, e.g., store worksheets, pens and visual instructions in a laminated file folder.

Incorporate structure into specific teaching or independent learning work tasks. For example:

- Remove extraneous materials from desks or tables before attempting to teach a new skill.
- Present only the text you want read, rather than the whole book. Highlight key words in the text.
- Create a set of sequenced pictures illustrating the steps involved in completing an important self-help task.
- Make sure that all tasks have an easily recognizable beginning and ending. For example, if the student is required to complete a partial page of calculations, mark the first question with a green marker and the last with a red marker.
- When asking a student to complete a project, provide a model or illustration of what the task should look like upon completion.

It is important to note that all students benefit from structure. Students with autism spectrum disorders generally have a higher need for structure than other students with or without disabilities. Accordingly, it is important to consider this need when organizing the instructional environment or specific tasks. Structuring the environment and instructional tasks increases independence and promotes success. As students become increasingly familiar with classroom structure and routine, these supports can be reduced.

Utilize Applied Behaviour Analysis

Applied Behaviour Analysis (ABA) refers to the application of behavioural principles to increase skills and decrease problematic behaviours. The behaviour analytic treatment for autism spectrum disorders focuses on systematically targeting small measurable units of behaviour.[28]

The following are some of the key principles associated with ABA.

- Focus on observable behaviours that can be measured and tracked over time.
- Examine the function of a behaviour—what it does or communicates for the student.

For more information on the development and use of a task analysis, see page 48.

- Develop a task analysis—break down complex tasks or skills into their component steps.
- Select target skills, teaching methods and consequences on a student-by-student basis.
- Base motivation systems on the principles of positive reinforcement.
- Clearly define and describe teaching methods and behaviours to ensure intervention strategies and target behaviours are clear to everyone involved.
- Control as many aspects of the learning environment as possible. This includes carefully selecting:
  - the type of cue or instruction to provide
  - the type of prompting to provide if the student does not produce the desired response in an independent manner
  - the type of reinforcement to motivate learning and behaviour change.
- Ongoing evaluation of the effect of instruction through systematic data collection.

Applied behaviour analysis (ABA) is a general strategy that has wide applicability to various student groups and settings. There are many elements of ABA that are discussed in this resource, including Functional Behavioural Assessment (FBA), task analysis, fading, shaping, reinforcement, etc. A teaching strategy derived from IBI that is commonly used with students with autism spectrum disorders is discrete trial training.

Components of a discrete trial

A discrete trial consists of four basic components:

- the teacher presents a specific, previously identified stimulus to cue the student to display a desired behaviour
- the student produces an observable and measurable response
- the teacher provides specific feedback to the student
- the teacher pauses between the consequence and a subsequent trial or instruction.

In order to be effective, several factors must be considered during discrete trial training. First, prior to issuing the original instruction, ensure the student is attending. Instructions should be short, concrete and phrased as a statement rather than a question. During the initial stages of teaching, it is important to use consistent wording. As the student experiences success, gradually vary instructions to promote generalization. It is also important to give instructions in a natural tone of voice.

Following the instruction, the student will respond correctly, incorrectly or fail to respond at all. If the student begins to display inappropriate behaviour or initiates an incorrect response, provide feedback immediately.

The feedback or consequence will vary depending on the student's response. If the student responds correctly, feedback will generally consist of praise and, if necessary, other forms of reinforcement. If the student responds incorrectly or does not respond at all, the teacher should provide feedback and prompt the student to produce a correct response. This step is often referred to as a correction trial. Some students find verbal corrections or reprimands, such as "no," quite aversive. The decision about which type of consequences to use should be made on a student-by-student basis.

Conducting a teaching session

The following outlines the steps involved in conducting a teaching session using ABA in general and discrete trial in particular.

These steps take place prior to the teaching session.

- The teacher identifies which skill will be taught during the session by referring to the student's IPP.
- The teacher decides which prompting methods and consequences will be used to promote learning. To do this, the teacher generally refers to collected data to determine what will constitute a correct response, the type of cue or instruction to provide, the level of prompting and the type of reinforcements that have proven effective in the past.
- The teacher identifies where the teaching session will take place. This decision is often based on the type of skill being taught and where the student is at in the learning process.
- The teacher identifies what materials will be used during the teaching session and ensures they are readily accessible.
- The teacher develops a data collection system to record critical information about the teaching session.

These steps take place during the teaching session.

- The teacher attempts to systematically control the teaching environment by using predetermined cues, prompts and consequences. This often involves conducting a series of discrete trials. In some cases, several trials targeting the same skills may be completed in succession. Alternatively, trials may be interspersed with other activities.

- The teacher records data regarding the level of prompting required, the student's responses and the types of consequences used.

The following is a basic sequence of events for a teaching session designed to target number identification skills, specifically the ability to identify the number five.

Behaviour objective:	Identifying the number five.
Instructor cue:	Oral direction "Touch five."
Correct response:	Student touches the number five when presented with cards with the numbers 1, 2, 3, 4 and 5 on them.
Incorrect response:	Student fails to respond or touches another number.

STIMULUS	**INSTRUCTOR PROMPT**	**STUDENT RESPONSE**	**CONSEQUENCE**
Instructor says, "Touch five."	Instructor taps the card with No. 5 on it.	Student touches the card with No. 5 on it.	Instructor smiles and says, "Good work" and gives a "high five."
Instructor says, "Touch five."	Instructor points to the card with No. 5 on it.	Student touches card with No. 3 on it.	Instructor shakes head but makes no verbal response.
Instructor says, "Touch five."	Instructor taps the card with No. 5 on it.	Student flaps hands.	Instructor shakes head but makes no verbal response.
Instructor says, "Touch five."	Instructor points to the card with No. 5 on it.	Student touches the card with No. 5 on it.	Instructor smiles and says "Good work" and gives a "high five."

Following the teaching session, the teacher:

- analyses and summarizes the collected data—this information is reviewed prior to future teaching sessions to aid in making informed decisions
- communicates critical information to others involved with the student to ensure consistency.

ABA encourages teachers to consider all aspects of the teaching environment. When teachers feel that learning is not occurring or not happening as quickly as it should be, the following possibilities should be considered.

- The student is not attending when the initial instruction or cue is delivered.
- Prompts are being provided too quickly or too late.
- The student is being overprompted.
- Inadvertent prompting is being provided. That is, the student is responding to an element of the environment that is not currently being considered a prompt.

- The selected reinforcers or consequences are not motivating to the student.
- Undesired behaviours are being inadvertently reinforced, e.g., other students attend to the student when the teacher withdraws attention.
- Teaching procedures are not revised frequently enough to ensure that skill acquisition occurs at a reasonable pace.
- The teaching procedures and target behaviours are not defined clearly enough to ensure consistency across teachers or environments.

Use activity-based instruction

In contrast to discrete trial teaching which often occurs within the context of highly structured and teacher-controlled instructional activities, activity-based instruction tends to occur within the context of typical classroom activities.[29] During these activities, teachers take advantage of teachable moments—naturally occurring opportunities to give relevant instructions or directions and naturally occurring forms of reinforcement. The use of activity-based instruction calls for careful planning to ensure students have multiple opportunities to practise skills in the context which those behaviours would typically occur. For instance, during an art activity the teacher could give instructions to teach colour identification skills, e.g., "give me red paper," "find the red paint brush," "give Justin the red paint." Since the reinforcement for demonstrating the desired response is engagement or access to the activity, it is important to carefully select motivating activities.

Activity-based or embedded instruction uses a number of teaching strategies based on the principles of Applied Behaviour Analysis. These strategies have been called Naturalistic Teaching.[30] Naturalistic teaching involves the following components.

- Teaching follows students' attentional leads, i.e., activities must be of interest to students.
- Student responses can be encouraged or elicited through environmental arrangements, e.g., putting desired toys out of students' reach, or through predetermined prompts.
- Reinforcement is related to student response, e.g., a student vocalizes toward a toy and is given opportunity to play with the toy.
- Teaching opportunities are embedded in activities.[31]

The activity-based approach to instruction allows teachers to focus on multiple goals or skills within a single activity. For example, a simple puzzle activity could be used to promote the development of communication skills, e.g., requesting puzzle pieces; social skills, e.g., taking turns with a peer; motor skills, e.g., placing pieces and cognitive skills, e.g., matching pieces to their holes. Another benefit of activity-based instruction is that reinforcement is built in to the activity. Because activity-based instruction occurs within the context of naturally occurring activities, skill generalization is often facilitated.

Discrete trial teaching methods are more structured and allow for more repetition or trials than activity-based methods. However, activity-based methods are typically easier to implement in inclusive settings and often result in greater skill generalization. Both methods are valuable and the decision regarding which to use should be based on the skill being taught, as well as students' behaviours, abilities and interests.

For instance, a highly distractible student may respond more positively to the discrete trial teaching method, while a student who is motivated to participate in a particular classroom task, may respond more positively to activity-based teaching methods.

Use peer-mediated approaches

Peer-mediated approaches work with many students with autism spectrum disorders. In some cases, a student may find the attention of a peer more motivating than that of an adult. In addition, the abundance of peers in the school environment creates natural opportunities for the student with autism spectrum disorders to learn from multiple examples. The natural variability displayed by peers creates a teaching situation that promotes generalization.

Peer-mediated approaches involve teaching peers to model specific desirable behaviours, e.g., appropriate attention seeking, and to use specific strategies during their interactions with students with autism spectrum disorders, e.g., being persistent. This approach tends to be most effective when teachers reinforce peers for their efforts.

Encourage independence

Students with autism spectrum disorders need opportunities to develop independent behaviours. If students are constantly supported, they may never develop the capacity to act independently. This is often referred to as prompt reliance or prompt dependence. Students with autism spectrum disorders can become over-reliant on teaching staff. It is critical that teacher assistants consistently encourage students to complete tasks and participate in classroom activities as independently as possible.

An effort should be made to fade adult support as students develop specific skills and abilities. This involves two distinct steps: fading assistance or prompting, and fading physical presence or supervision.[32]

See Appendix D, page 176, for a Hierarchy of Prompts.

Fade prompts

A prompt hierarchy is often used to aid in the fading of prompts. Prompts can be:

- verbal, i.e., giving instructions
- visual, i.e., showing students what to do
- physical, i.e., physically assisting students.

More intrusive levels of prompting should only be used after less intrusive prompts have proven ineffective. As students experience success, prompts should be consciously faded. It is also important that student progress be carefully monitored and communicated to all staff in the classroom to ensure that prompting is consistent, and that prompt reliance and dependency are not inadvertently reinforced. It is often helpful to incorporate visual aids to decrease reliance on physical and verbal prompts, e.g., providing students with visual schedules to follow rather than relying on adult prompting. Similarly, visual organizational aids, such as schedules, task outlines, check lists and charts, can facilitate the development of independence during specific classroom routines and transitions. Teaching staff should point out the environmental/contextual cues associated with certain tasks, e.g., the bell ringing before recess, and routines to increase student awareness of them.

Fade physical presence

Once students have the skills necessary to complete specific tasks or activities, teaching staff should fade their physical presence. During any given school day, teaching staff alternate between actively supporting students and monitoring them from a distance. Constant shadowing, and unnecessary prompting and support can adversely affect students' abilities to function independently. Teaching staff should closely monitor the progress of students, and fade assistance and presence as new skills emerge. During peer interactions, students may require adult assistance to initiate and structure activities. Once an activity has started, it may be possible for teaching staff to fade out of the immediate environment.

Peers can be enlisted to reduce dependence on adult supports. Students with autism spectrum disorders should be encouraged to look to their peers when they are unsure what they should be doing. Following the lead of peers is a critical skill. In addition, peers can be asked to provide more direct forms of prompting, e.g., informing the other student that it is time to go to the library. This helps ensure that students learn to respond to peer directions as well as those of adults.

Effective Teaching Practices

Use task variation

The individual schedules for students with autism spectrum disorders should fit comfortably into the overall classroom schedule. Vary tasks to prevent boredom, and alternate activities to reduce anxiety and inappropriate behaviours. For example, alternate familiar, successful experiences with less-preferred activities. It may be helpful to alternate large-group activities with calming activities completed in quiet environments. In addition, incorporating physical activity and exercise during scheduled activities can have positive benefits. All planned activities should be charted in visual forms and posted at or near the desks of students with autism spectrum disorders. Students can learn to use schedules independently and staff can direct students to the schedules when it is time to change activities.

Use task analysis

Task analysis involves breaking large tasks into small, teachable units. Teachers often need to break complex tasks down into sub-skills to ensure students are successful. Each sub-skill should be taught and reinforced in sequence. For example, when teaching a self-help skill such as brushing teeth, the task may need to be broken down into sub-skills: getting the toothbrush and toothpaste, turning on the water, wetting the toothbrush, unscrewing the lid of the toothpaste, putting the toothpaste on the toothbrush, etc. Life skills, social skills and academic skills can also be broken down into teachable components.

Forward and backward chaining

Skill sequences that have been broken down through task analysis may be taught through forward and backward chaining.

- Forward chaining—In forward chaining the emphasis of instruction is placed on teaching the first behaviour or skill in the chain that the student has not mastered. For example, a teacher might use forward chaining to teach the student how to access a particular computer program. Forward chaining on this task might involve teaching the student to turn the computer on, if the student has not mastered that step. The teacher would focus his or her instruction on this step while simply assisting the student through the remaining steps of the task. As each step is mastered, the teacher would reduce or eliminate assistance on previous steps. Gradually the student masters more of the steps until he or she can complete the task independently.

- Backward chaining—In backward chaining the last behaviour or skill in the sequence that the student has not mastered is taught first. In the example used previously, the teacher might assist the student through all the previous steps of the skill sequence and focus his or her instruction on teaching the student to double click on the appropriate computer program. Once that step is mastered, the teacher might concentrate on teaching the student to select the correct program from the computer desktop. As in forward chaining, assistance is faded as the student completes more steps of the sequence independently.

See Appendix E, pages 177–181, for examples of common tasks that are analyzed and broken down into component steps. A blank sheet is included on page 182.

Backward chaining has the advantage of allowing the student to experience the completion of the task immediately after instruction. For instance, if backward chaining were used to teach a student to put on his or her coat, the last step of the task would likely be pulling up his or her zipper. Following task completion, the student would probably be given an opportunity to go outside. As a result an activity that is reinforcing (going outside) immediately follows the task (pulling up his or her zipper). However, the decision to use backward or forward chaining often depends on the nature of the task.

Use shaping techniques

Teaching a new acceptable behaviour may involve shaping a behaviour by reinforcing approximations of that behaviour. Each reinforcement is provided for a closer approximation. For example, if the goal is for a student to stay on task for 15 minutes, the following shaping procedure might be used.

Desired Behaviour = 15 minutes on mathematics tasks
Student is reinforced for 2 minutes of on-task behaviour.
Student is reinforced for 4 minutes of on-task behaviour.
Student is reinforced for 6 minutes of on-task behaviour.
Student is reinforced for 10 minutes of on-task behaviour.
Student is reinforced for 12 minutes of on-task behaviour.
Student is reinforced for 15 minutes of on-task behaviour.

Another example of shaping might involve accepting a one-word request for a desired object until that skill is firmly established, then "upping the ante" by requiring a two-word request.

Provide precise, positive praise

Give students precise information about what they do right or well, for example, "great painting" or "good work on that math problem." Generalized praise may result in unintended learning that is hard to reverse. Students with autism spectrum disorders may acquire new skills based on a single learning opportunity or trial, so directing praise to specific behaviour is important: "Sal, you are doing very well at multiplying these numbers." Accidental or unanticipated learning may occur if students mistakenly connect something else they are doing with praise. Saying, "Sal, you are doing very well," when Sal is swinging his feet while he does the math assignment might prompt him to associate praise with swinging his feet.

Use meaningful reinforcements

Reinforcers can be anything from praise to tangible objects that increase the behaviour a student is trying to learn. A reinforcer is only a reinforcer if it results in an increase in a specific behaviour. It is important to be aware that students with autism spectrum disorders may not be motivated by reinforcers that work with other students. They might prefer time to:

- spend alone
- talk to a favourite staff member
- go to the cafeteria
- exercise
- play with a desired object
- listen to music
- play with water
- perform a favourite routine
- play with items that provide sensory stimulation
- sit by the window.

See Appendix F, page 183, for a Likes and Dislikes Chart and Appendix G, page 184, for a Checklist of School Reinforcers.

It is important to know what works as reinforcement for individual students. Preference profiles that identify the reinforcers students prefer can be helpful. These lists can be developed with the help of family members and shared with service providers.

Plan tasks at an appropriate level of difficulty

Students with autism spectrum disorders may become anxious and frustrated if they cannot perform assigned tasks. Teachers should support students through instructional adaptations. Teachers must select the most appropriate level of adaptation for a given activity for specific students. In general, students should be included in regular instruction to the greatest extent possible. Adaptations should be carefully selected to ensure that students are successful and that their learning is extended.

The process of selecting an appropriate level of adaptation for a specific activity is illustrated in the following example. The adaptations should move from simple to more complex, on an as needed basis.

Classroom Activity: "Math Minute" Worksheet

Level 1: No adaptation

- The student with autism spectrum disorders completes the same worksheet and under the same conditions as classmates.

Level 2: Same activity with adaptation

Examples:

- The worksheet contains fewer questions.
- No time limit is enforced.
- The student is given a calculator.
- A pencil grip is used.
- A peer or assistant records answers for the student.
- The worksheet contains different questions, e.g., no carrying questions.
- Manipulatives are used.

Level 3: Parallel or alternate activity involving the same subject

Examples:

- The assignment involves:
  - matching numbers
  - completing a dot-to-dot worksheet
  - patterning activities
  - tracing numbers
  - completing a number puzzle.

Level 4: Alternate functional activity (embedded in routine)

Examples:

- The student uses a picture task analysis to gather materials for one of the activities listed above.
- The student makes purchases and calculates cost and change after addressing money skills in class.
- The student counts heads during attendance for math class.
- The student counts how many math worksheets the class requires.
- The student distributes worksheet to selected peers.

Given the range and skills of students with autism spectrum disorders, it may not be appropriate to adapt every regular classroom activity. When that happens, it may be possible to provide focused and individualized instruction on IPP goals that are difficult to meet during ongoing classroom activities. In the example provided, the teacher might arrange for the student to work on activities that are not easily accommodated in the classroom during the time when the other students are involved in a regularly scheduled classroom activity, such as completing a math worksheet.

Use age-appropriate materials

It is important to treat students with autism spectrum disorders with respect by ensuring instructional materials are appropriate. Even if instruction must be modified significantly, the learning materials should be appropriate to the age of the student.

Provide opportunities for choice

Because students with autism spectrum disorders are frequently frustrated by their inability to make themselves understood, they need instruction in communicating choices. Many parts of their lives are necessarily highly structured and controlled by adults. Sometimes, students continue to choose one activity or object because they do not know how to choose another. It may be helpful to develop a choice menu to help students select activities and tasks. Examples are included on page 62.

Acceptable methods of providing choice should be developed on an individual basis. Direct teaching of making choices may be helpful. Choice should be limited to one or two preferred activities until students grasp the concept of choice.

Break down oral instructions

Avoid long verbal explanations when providing instruction for students with autism spectrum disorders. Supporting oral instruction with visual cues and representations helps students understand.

Prepare students for upcoming lessons

Whenever possible, expose students with autism spectrum disorders to concepts and materials prior to presenting the information to the entire class. Students with autism spectrum disorders may require more time and repetition to learn a new skill or concept and incorporate it into their existing repertoire. By starting the instructional process earlier, learning opportunities are increased.

Pay attention to processing and pacing

Students with autism spectrum disorders often need more time to respond than other students and may need to process each discrete piece of a message or request separately. Providing extra time generally, and allowing for ample time between giving instructions and student responses are important tactics for supporting students with autism spectrum disorders.

Use concrete examples and hand-on activities

Teach abstract ideas and conceptual thinking using concrete examples, and vary the examples so that a concept can be applied in a variety of ways.

Introduce unfamiliar tasks in a familiar environment

When possible, introduce unfamiliar tasks in a familiar environment. For example, teach a student to order food in the school cafeteria before requiring the student to carry out the same task in an unfamiliar restaurant. When that is not possible, prepare students for new tasks and environments using pictures, videotapes and/or social stories. For example, show students photographs of the environment that a new task will be completed in, or a video of a familiar adult or peer completing the task.

Direct and broaden fixations into useful activities

If students are fixated on objects or topics, such as colours or shapes, use them to teach concepts. For example, a student's fixation on car parts can be used to teach a variety of math and fine motor activities.

Maintain a list of individual strengths and interests

Family members can provide valuable information about what students know and do at home or in the community. Build on these interests and skills for instruction, and to reinforce successful learning and behaviour.

Develop talents and interest areas

If students demonstrate particular interests and strengths in specific areas, e.g., music, drama, art, graphics or computers, provide opportunities to develop further expertise in those areas.

Strategies for Addressing Sensory Issues

Assess sensory issues

Inventories of sensory factors can be used to minimize the negative effect sensory information may have on students with autism spectrum disorders. Parents are a valuable source of information about sensory difficulties. Occupational therapists can provide specialized knowledge regarding sensory integration and help develop strategies to address identified problems related to sensory processing. Consider the following when developing inventories.

> *"Autism cuts me off from my own body, and so I feel nothing. Autism also can make me so aware of what I feel that it is painful."*
>
> Williams, 1994

- Auditory:
  - Are there noises, e.g., fans, loudspeakers, fire alarms, voices, air conditioners, bells, dogs barking or chairs scraping, that the student may find aversive?
  - What is the general sound level, and the predictability and repetitiveness of sounds?
  - What can be done to minimize the negative effect these stimuli may have on a student with autism spectrum disorders in the class?
  - Consider the student's comprehension of verbal information and the time typically required to process auditory information, and shift attention between auditory stimuli.
  - Consider whether there are any forms of auditory stimulation that the student particularly enjoys or finds calming.

- Visual:
  - Are there stimuli, such as light, movement, reflection or background patterns, that affect the student's ability to attend to the learning activity?
  - Consider the eye level of the student, the position of the teacher in relation to the student and distracters that may interfere with attention.
  - Consider the time required to shift visual attention.
  - Be aware of visual stimuli that the student might find aversive. Attempts to reduce the effect of these stimuli may enhance learning and reduce challenging behaviour.
  - Consider whether there are any forms of visual stimulation that the student may find pleasurable.

- Tactile:
  - Does the student find certain textures aversive?
  - Are temperatures appropriate?
  - Does the student demonstrate a need to explore through touch and yet avoid being touched?

- Vestibular:
  - Consider the student's need to move and exercise.
  - What are the student's reactions to movement?
  - How can the student's program incorporate necessary movement without unduly jeopardizing the attention and learning of other students in the class?

- Taste and smell:
  - Consider preferences in taste and smell of foods and other materials.
  - Consider the student's responses to smell when selecting activities.
  - Keep in mind that these preferences will affect the teaching of appropriate behaviour for snacks or mealtimes.

COMMON DIFFICULTIES WITH SENSORY SYSTEMS: OBSERVABLE BEHAVIOURS

HYPER-REACTIVE BEHAVIOUR	HYPO-REACTIVE BEHAVIOUR
AUDITORY SYSTEM	
• is easily distracted by background sounds • overreacts to sounds • has unpredictable reactions to sounds • holds hands over ears to block noise • screams or cries at sounds in the environment • responds physically as if sound is a threat	• does not respond to name being spoken • seems oblivious to sounds of surrounding activities • creates constant sounds as if to stimulate self • behaves in an unsafe manner—does not react to sounds indicating potential danger • does not respond to any kind of sound
VISUAL SYSTEM	
• is disturbed by bright lighting • avoids sunlight • follows any movement in the room with eyes • covers part of visual field—puts hands over part of the page of a book • responds physically to appearance of certain objects or colours	• is unaware of the presence of other people • is unable to locate desired objects, people • loses sight of people or objects when they move • cannot distinguish figure-ground relationships
TACTILE SYSTEM	
• does not like to be touched • avoids tasks with a strong tactile element (clay, water play, paint, food preparation) • complains about discomfort of clothing • refuses to wear certain items, tugs at clothes • responds negatively to textures in foods, toys, furniture	• does not seem to grasp concept of personal space • does not seem to notice touch of others • frequently puts things into mouth • does not adjust clothing that would appear to be an irritant • has high pain threshold, is unaware of danger because of low response to pain
VESTIBULAR SYSTEM	
• overreacts to movement activities • has difficulties navigating on different surfaces, e.g., carpets, grass • walks close to wall, clings to supports such as banisters • seems to be fearful when movement is expected, muscles seem tense • is rigid about positioning of body, keeps head in same fixed angle • seems to become physically disoriented easily	• seems to need constant movement • rocks, travels in circles • seems to tire easily when engaged in movement activities • is generally slow to move, lethargic • takes a long time to respond to directions to move
GUSTATORY & OLFACTORY SYSTEMS	
• eats a limited variety of foods • gags, refuses foods • has difficulties with oral hygiene • spits out foods, medications • overreacts to smells in environment • avoids places or people with strong odours	• seems to be constantly wanting food • licks objects in the environment • chews on objects inappropriately • may ingest dangerous substances despite their unpleasant taste • sniffs objects and people in unusual ways • does not seem to notice the smells others notice

Implement a sensory diet

Students with autism spectrum disorders often have a difficult time managing their anxiety and modulating their levels of arousal. When they are anxious or hyper-aroused, they often have difficulty attending to instruction and completing structured tasks. This may result in problematic behaviours. Alternatively, when students are hypo-aroused, they often have difficulty initiating activities and remaining alert. It is often necessary to implement a "sensory diet" to help students maintain optimal or appropriate levels of arousal in the classroom. A sensory diet generally consists of alerting or energizing activities and relaxing or calming strategies that are incorporated into the day to meet students' sensory needs.

Alerting/energizing activities

Alerting or energizing activities are generally presented to increase students' levels of arousal and focus. These activities need to be closely monitored to ensure students do not inadvertently become over-stimulated.

Alerting activities include:

- participating in gross motor activities, e.g., jumping on a trampoline, running in gym
- participating in sensory activities, e.g., sucking on ice, drinking sour or tart juices
- being exposed to fresh air
- playing with cold water
- playing with toys with bright lights
- listening to relatively loud music.

Relaxing/calming strategies

Relaxing or calming strategies are generally used to reduce anxiety and students' levels of arousal. These strategies tend to be most effective when they are implemented early, when students first demonstrate signs of anxiety or hyper-arousal. Students who display a high level of anxiety often respond positively to intermittent relaxation breaks scheduled strategically throughout the day.

Relaxing strategies include:

- listening to music with headphones
- moving to a quiet environment
- having a deep pressure massage
- sucking, e.g., drinking from a juice box
- playing with favourite objects
- breathing deeply
- tensing and relaxing muscles

- sitting quietly and looking out the window
- engaging in a repetitive behaviour
- rubbing lotion on hands or arms
- reviewing a calming story or script
- using weighted vests or blankets.

Occupational therapists can suggest strategies for moderating hyper-arousal. Some of the strategies identified above, i.e., deep pressure massage and use of weighted vests, should only be attempted under the guidance of an occupational therapist with expertise in the use of sensory integration techniques.

It is important to note that what is calming for one student may increase anxiety for another. Students can be taught to communicate that they need a break before inappropriate behaviour escalates. Relaxation training can teach students specific routines and behaviours for relaxing.

Planning for change is important in managing behaviours. Students may need opportunities for rehearsal and desensitization to new places, people or things. Change is difficult for students with autism spectrum disorders, but adapting to and coping with change is a necessary life skill. Introduce new situations slowly so students have opportunities to become familiar with different settings, people and expectations.

Encourage appropriate sensation seeking

Some students with autism spectrum disorders crave specific forms of sensory input and seek out those sensory experiences in inappropriate ways. For instance, a student who enjoys tactile stimulation may rub saliva on his or her hands to gain desired input. Similarly, a student who enjoys strong vestibular and proprioceptive stimulation may engage in aimless running, spinning or crashing. It is also common for students with autism spectrum disorders to engage in inappropriate smelling or place inedible objects in their mouths to gain sensory feedback. However, it is important to consider the specific function of each new behaviour students display and realize that not all unusual or problematic behaviours are sensory in nature.

Generally, the most effective way to deal with inappropriate behaviours is to provide students with more appropriate ways to satisfy their sensory cravings.

Inappropriate sensation seeking	More appropriate alternative
– playing with saliva	– rubbing lotion on hands
– aimless running, spinning	– playing tag or running races
– smelling hair or feet	– using scratch and sniff stickers
– placing inedible objects in mouth	– sucking on hard candies
– grinding teeth	– chewing on rubber tubing

Note frustration

Examine the school day for activities and situations that may result in sensory overload or frustration. Provide sensory experiences that are calming to accompany potentially frustrating tasks. Whenever possible, adapt tasks and materials to promote successful participation. When feasible, decrease environmental distracters and eliminate activities that confuse, disorient or upset students and interfere with learning.

Provide relaxation

It may be necessary to prepare a calm, quiet area where students can go to relax. Relaxing may mean engaging in repetitive behaviours that have a calming affect on students with autism spectrum disorders. In some cases, students who crave certain repetitive movements, such as rocking or other self-stimulating behaviours, can be provided opportunities where this movement is permitted. These activities should be monitored in an unobtrusive manner to ensure safety.

Considerations

There is much debate about the effectiveness of sensory integration techniques for students with autism.[33] Sensory integration techniques, like all interventions used with these students, should be based on an assessment of the student's needs, evaluation of the merits of various intervention options and careful monitoring of the effect of intervention on predetermined outcomes. It is also important to be alert for unintended effects of interventions. For example, providing a potentially reinforcing event such as music or a deep pressure massage immediately after an undesirable behaviour might inadvertently result in an increase in that behaviour. Consequently, it is important to have a clear outcome in mind prior to implementing an intervention and to monitor the effect of the intervention on that student's behaviour. With this caution in mind, sensory integration techniques can be a powerful behaviour management tool.

Strategies to Facilitate Communication

Expanding the communication skills of students with autism spectrum disorders is one of the greatest challenges for teachers and families. Most people are unaware of the complexity of normal communication because most children develop these skills automatically, usually by the age of three or four. Many students with autism spectrum disorders do not develop the skills they need for spontaneous communication and must be taught them. Helping students develop communication skills so they can express their wants and needs, interact socially, share information and express emotions, is a priority.

Programs to facilitate communication may begin in structured settings, however promoting generalization and facility in using language requires that interventions take place in natural settings. Functional language skills are best taught in the social context where they will be used[34] and where they have real meaning. The school environment provides a wealth of opportunities for developing functional communication within social contexts and promoting generalization. Specific skills requiring instruction and strategies for developing the targeted skills must be identified.

The school team should collaborate to identify communication goals and objectives for students with autism spectrum disorders. Base interventions on the abilities and needs of individual students and take into account the environments in which students interact with others. Speech-language pathologists can help assess communication skills, and provide suggestions and strategies tailored to the unique needs and characteristics of individual students.

The following are general suggestions for assisting with communication.

- Focus on developing interaction and communication in the environments in which students participate.
- Model speech by speaking in full sentences.
- Use vocabulary appropriate to students' comprehension levels. For students with severe communication disabilities, choose familiar, specific, concrete words and repeat as necessary.
- Use language that is clear, simple and concise. Figures of speech and irony may confuse students with communication difficulties.
- Give students ample time to process information. It may be necessary to speak slowly or pause between words.

"Autism…stops me from finding and using my own words when I want to. Or makes me use all the words and silly things I do not want to say."

Williams, 1994

Teach listening

Students with autism spectrum disorders often need structured lessons on how to listen. Break listening down into components and reinforce each component. For example, teach students to face the speaker, keep their eyes on the speaker (which does not necessarily mean they must make eye contact) and place their hands in a planned position. Praise or otherwise reward each step.

Develop oral language comprehension

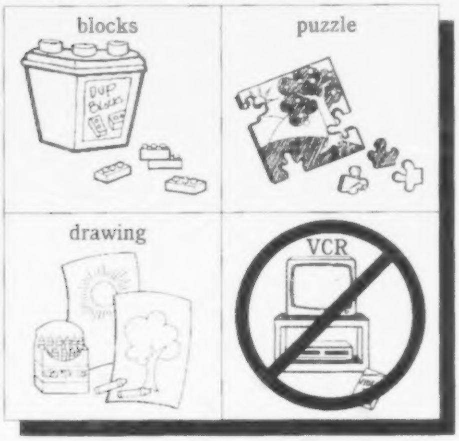
Accompanying spoken language with relevant objects, pictures, photographs and other visual supports can help students comprehend meaning. Many students with autism spectrum disorders use reading to support oral comprehension rather than the reverse. This makes reading skills even more critical for these students.

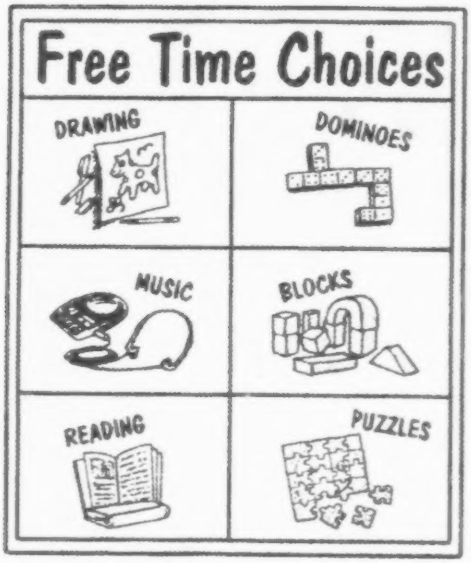
One effective way to facilitate functional communication is to provide controlled choices. Visual supports can be particularly useful for communicating a range of available choices.

Examples of visual supports for communicating a range of choices follow.

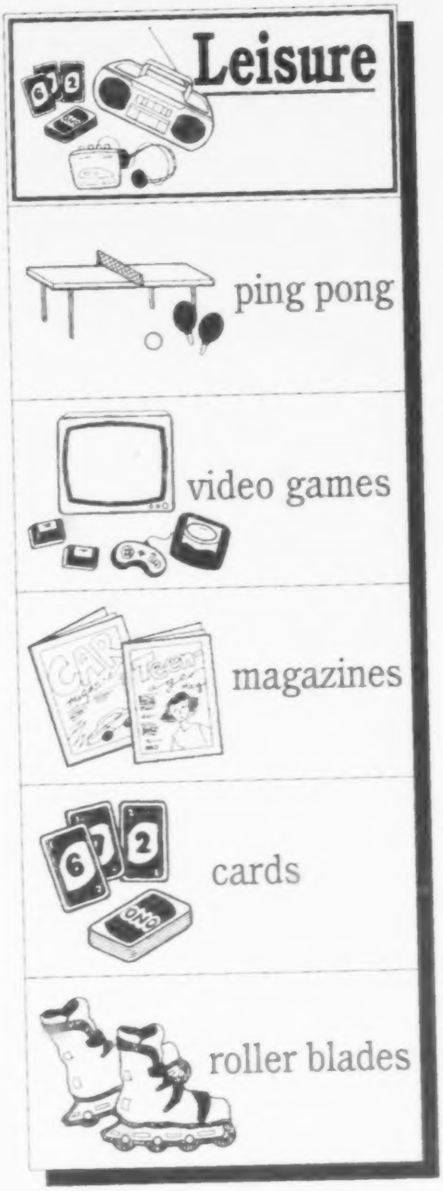
Visual Supports for Communicating Choice

35


blocks
DUP Blocks
puzzle
drawing
VCR


Free Time Choices
DRAWING
DOMINOES
MUSIC
BLOCKS
READING
PUZZLES

36


Leisure
ping pong
video games
magazines
CAR
Teen
cards
6
7
2
UNO
roller blades

Even students who can repeat information and demonstrate good recall may not grasp the intended meaning. It is important to check for comprehension.

Develop oral language expression

Although many students with autism spectrum disorders may not develop traditional oral language, most do develop some form of communication. It is important to have a thorough knowledge of students' forms of expression and adjust expectations for communication accordingly. For students with limited oral expression, accept limited verbal attempts and nonverbal behaviour as communicative. A customized communication dictionary is a useful tool to document what a student says and means.

See Appendix H, page 185, for a form to create a communication dictionary.

Even students who do have oral language may have difficulty adding to their working oral vocabularies easily. Teachers need to teach new vocabulary in a variety of contexts using a visually-based approach.

Students need to know that:

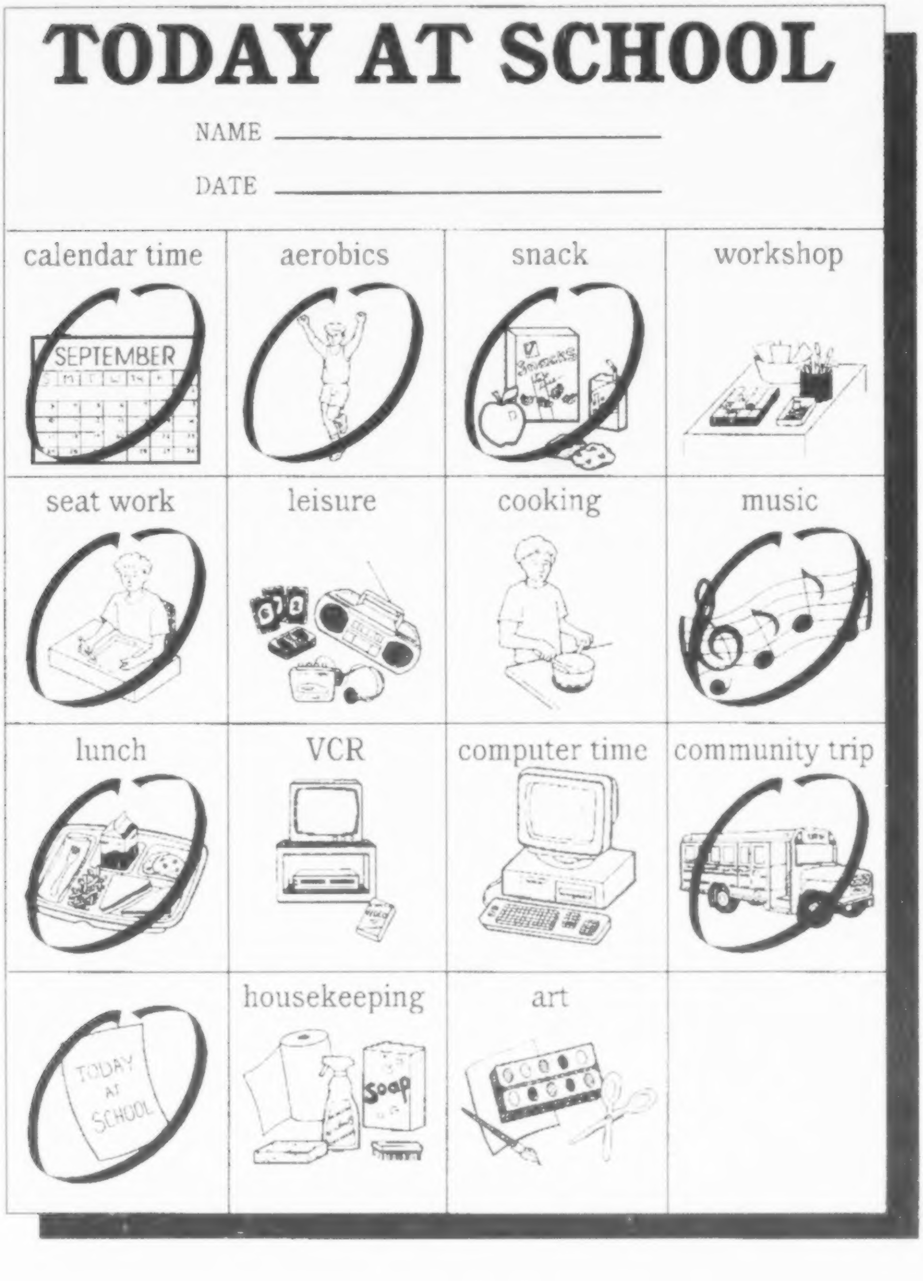
- everything has a name
- there are different ways of saying the same thing
- words can be meaningful in a variety of contexts
- learning to use words will help them communicate their needs and desires.

Students who rely on pictorial representations to communicate need to learn that drawings or representations have names and that they can give direction or explain what to do. This understanding is essential if visual systems are to provide meaningful communication.

Students need a variety of learning situations that encourage different types of expression, such as:

- requests
- negation
- commenting.

The following are examples of a visually-based strategy for prompting communication about a student's day.



TODAY AT SCHOOL

NAME ______________________

DATE ______________________

calendar time	aerobics	snack	workshop
seat work	leisure	cooking	music
lunch	VCR	computer time	community trip
	housekeeping	art	

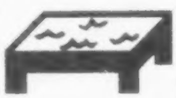
SEPTEMBER
Snacks
TODAY AT SCHOOL
Soap

TODAY AT SCHOOL

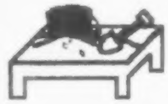
NAME ____________________

DATE ____________________

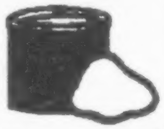
water table



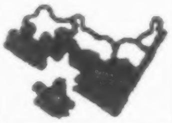
sand table



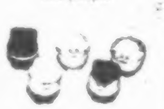
playdoh



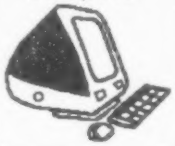
puzzle



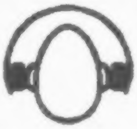
little people



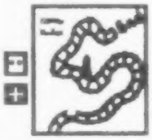
computer



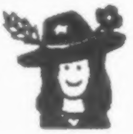
listening centre



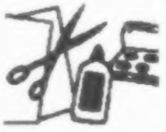
game



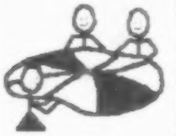
dress-up



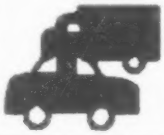
arts and crafts



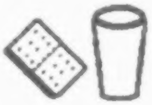
parachute game



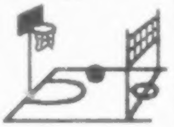
cars and trucks



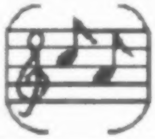
snack



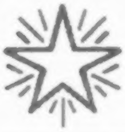
gym



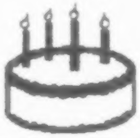
music class



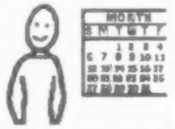
special activity



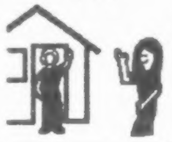
birthday



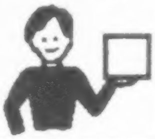
special helper



visitor



show tell



Notes: ____

____

____

Develop conversation skills

Virtually all people with autism spectrum disorders have difficulty with the pragmatics of communication—the interpretation and use of language in social situations. Even those individuals with adequate vocabulary and some command of language may have restricted understanding of social and conversational interactions.[39]

For some students, it may be necessary to provide structured teaching to develop the oral language needed for social and communicative play. Structured play opportunities that incorporate students' interests can be an effective way to do this. Modelling, physical prompts, visual cues and reinforcement can be used to facilitate attention, imitation, communication and interaction. To facilitate social communication, structure interactions around students' activity preferences and routines. Encourage informal and formal communicative social exchanges during the day.

Simple drawings are an effective strategy for teaching conversation skills. These drawings illustrate what people say and do, and emphasize what they may be thinking. Symbolic drawings can be used to represent basic conversational concepts, such as listening, interrupting, loud and quiet words, talk and thoughts. Colours may be incorporated to represent emotions.[40] Pictures with scripts can also be used to develop conversation skills and communication appropriate to specific social contexts and situations.[41]

Students with autism spectrum disorders have difficulty understanding subtle social messages and rules, and have problems interpreting the nonverbal communication of others. It may be helpful to provide students with concrete rules and present them in a visual format, by writing them down or incorporating them into social stories or comic strip conversations.

Students also need opportunities for social interaction to practise communication skills.

Echolalia

Some individuals with autism spectrum disorders demonstrate echolalia—the literal repetition of words or phrases from language of other people. Young children use echolalia as part of normal language development. However, some individuals with autism spectrum disorders stop developing at this level of language growth. Echolalia can be both immediate or delayed. Individuals may repeat what was just heard or repeat it later, sometimes many months or years later.

Immediate echolalia can be used as a teaching tool. Echolalic speech phrases can be shaped by using speech rules and the echolalic skill to model appropriate language.[42] For example, when students echo back questions, teachers can shape responses by modelling appropriate responses. This strategy is highly individualized and it may be appropriate to consult with a speech-language pathologist for specific suggestions for individual students.

Delayed echolalic utterances may have no obvious meaning for the listener. Students with autism spectrum disorders sometimes repeat television commercials word for word. To understand the function of the language behaviour, it is helpful to think of it as a chunk of language that has been stored without regard for meaning. A situation or emotion may trigger use of the speech, even if it seems to have no connection to the situation. Students often do not understand the content of the echolalic speech they are using. When possible, try to determine the situation that elicited the speech and prompt appropriate language to use for that situation.[43] For example, when a student echoes the script from a soft drink commercial, it may mean the student is thirsty. Test this possibility by asking "Do you want a drink?" Sometimes it is not possible to figure out a logical connection for delayed echolalic utterances.

Augmentative communication systems

Many students benefit from the use of augmentative communication systems. Augmentative communication systems support, enhance or add to the way a person says something. They may be used with nonverbal students as well as with students who have verbal expression but appear unable to use speech in a functional way to express wants and needs. Augmentative communication systems range from low-tech (those not requiring any power source) to high-tech (those requiring power).

Augmentative or alternative communication could include:

- directly moving a person or object to communicate, e.g., pulling the teacher to the door when the student wants to go outside
- using gestures or body actions to convey meaning, e.g., shaking the head to express negativity
- using real objects to convey messages, e.g., bringing a jacket to indicate the desire to go home
- using picture representations, e.g., the Picture Exchange System or PECS[44]

- using the voice without conventional words, e.g., saying "Ah-ah-ah" to indicate the need to use the toilet
- using written messages by pointing at words or by writing, e.g., using a word processor to communicate
- using sign language gestures.

Deciding whether to implement an augmentative communication system, and selecting the type of system, are decisions that should be made carefully, based on an assessment of the learner's level of cognitive ability, skills, interests and motor abilities. The spectrum of choices can be illustrated as a continuum:

highly abstract	signing
	written sentences
	written phrases
	written words
↓	drawings
	photographs
	gestures
	miniature objects or models
concrete	full-sized objects

Parents need to participate in such decisions because to be effective, the communication system should be used consistently both at school and at home. Speech-language pathologists or other professionals in the area of autism spectrum disorders and augmentative communication systems are important sources of expertise. The teacher's role is to implement the decision and support the student in learning to use the system.

Parents and teachers may be reluctant to incorporate augmentative communication systems for fear that they may hinder or prevent the development of spoken language. However, augmentative communication systems often result in increased verbal output in that they aide word retrieval, facilitate the production of complex utterances and reduce anxiety for students. When anxiety is reduced, verbal communication is more likely.

There are promising results from current research on using computer technology as a means for communication and computer-assisted learning as a strategy for teaching communication skills.

Strategies for Teaching Social Skills

One defining characteristic of autism spectrum disorders is impairment in social interactions and social skills. Individuals with autism spectrum disorders do not automatically learn the rules of interaction with others and may be unable to follow unwritten rules of social behaviour.

Many people with autism spectrum disorders operate on faulty perceptions that are rigid or overly literal. Recognizing these faulty perceptions can be helpful in understanding the behaviour and needs of these individuals in social situations. Misperceptions include:

- rules apply in only a single situation
- everything someone says must be true
- when you don't know what to do, do nothing.

Students with autism spectrum disorders often have difficulty understanding social situations and expected behaviour. They may use ineffective methods of interacting because they do not know more appropriate ones, or they may be unable to distinguish between situations in order to select appropriate behaviours.

Social skill instruction is essential for students with autism spectrum disorders, as well as a crucial component of intervention plans for changing problem behaviours. In order to help students, it is necessary to carefully assess their social competencies to determine which social skills must be explicitly taught.

To develop social skills, students need opportunities to participate and interact in a variety of natural environments where appropriate models, natural cues and stimuli, and functional reinforcers are available.[45] Placement within integrated environments provides access to peer models and social opportunities. Plan opportunities for successful social interaction. Students will benefit from integrated environments in which classmates can be positive models and provide a range of social opportunities. The following is a list of ideas for creating social exchanges in classroom situations.[46]

Table time ideas

- Have a student hand out markers, asking "What colour do you want?
- Have a student ask classmates "How are you feeling today?" and identify a picture representing that emotion.
- Create group art projects.

- Create a poster that has a picture of a home on one half and a picture of school on the other. At the beginning of the day, all students' photos are under the home picture. Nominate one student each day to hand students their photos to put under the school picture as they arrive.

Circle time ideas

- Assign a greeter to greet students with a hello or high five as they come to circle.
- Use puppets to teach social scenarios and the social skills curriculum.
- Make up a song, "This is what I can do…" in which each student called upon imitates a motor action from the first student.
- Have a student give other students reinforcers (stickers, stamps on the hand).
- Pair students for dancing and movement activities.
- Pass around a visual prop for group songs, e.g., a plastic cookie for *Who Stole the Cookie from the Cookie Jar*, or a plastic potato for *Hot Potato*.

Transition ideas

- Have students choose partners to line up with to go outside.
- Have students ask another to join in an activity.

Centre time ideas

- Encourage play in small groups by limiting the number of centres.
- When cleaning up, have one student hand toys to another to put away.
- Create group projects.
- Have two students share a computer so that one selects what to find while the other operates the mouse. Encourage turn-taking and provide a symbol of "my turn" for students who are nonverbal.

Quiet time ideas

- Have students share books with buddies.

Outside ideas

- Buddy students with partners to play with for the first five minutes of recess.

Motor group time ideas

- Incorporate at least one activity in which students need partners, e.g., wheelbarrow activity.

Miscellaneous ideas

- Have students compliment a friend. Write the comments down on a heart.
- Catch students doing something positive and write the gestures on cut-outs, e.g., train cars or footsteps, to put up on the wall. The goal is to surround the classroom with kind words and kind deeds.

Social skills are often considered the primary deficit associated with autism spectrum disorders. It is often necessary to teach basic social awareness and interaction skills, such as tolerating others in environment, before addressing advanced skills, such as turn-taking or sharing. There are several social interaction skills that are critical for positive, long-term outcomes. These include: the ability to orient when others attempt to gain attention, eye contact, tolerating others in the physical space, imitation skills, parallel play, sharing and friendship behaviours. Before addressing higher-level social skills, such as friendship behaviours, prerequisite skills, such as making eye contact, must be taught.

Access to models and opportunities to develop social skills is not usually enough. In general, students with autism spectrum disorders need explicit teaching to develop social skills and understanding of social situations. There are a variety of promising practices for supporting students with autism spectrum disorders in developing social skills.

Provide opportunities for meaningful contact with peers

Opportunities for contact with peers include:

- involving students in shared learning activities
- pairing students with buddies for walking down the hall, playing on the playground and during other unstructured times
- varying peer buddies across time and activities to prevent dependence
- involving peers in providing individualized instruction
- arranging cross-age peer buddies by assigning older students to assist students with autism spectrum disorders
- pairing students for special school events, such as assemblies and clubs
- facilitating involvement in after-school or extracurricular activities.

When classes of older students are paired with younger students, ensure that older students with autism spectrum disorders are also paired and provide the necessary supports for success.

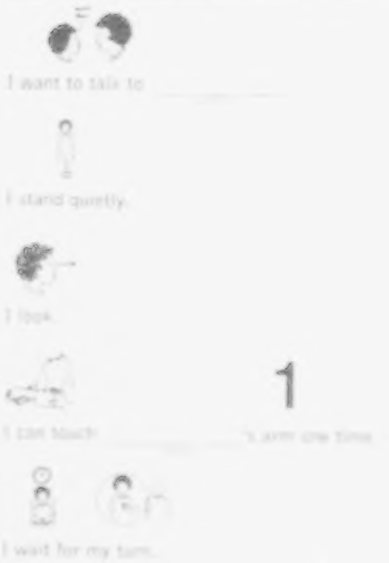
Use visuals to teach social skills

Visual strategies are extremely useful for teaching social skills. Visuals provide a static and concrete representation of behaviours and can be used to teach and prompt a variety of social skills, including:

- social conventions, e.g., greetings, asking permission, table manners, excusing oneself
- social survival skills, e.g., lining up, dealing with routine transitions, following school rules
- interactive skills, e.g., turn taking in play and conversation, sharing toys or activities, maintaining and respecting personal space, initiating interactions
- dealing with new or challenging social situations, e.g., getting lost, appropriate behaviour during assemblies or concerts.

Two examples of visuals to support the development of social skills follow. The first can be used to teach the steps involved in getting attention. In this example, the task is broken down into discrete steps and represented in pictures and words. The second example involves a visual social script. Social scripts provide information on how to deal with a problem or behave in a particular social situation. Social scripts can also include the specific words that a student can use in that situation.

Getting Attention[47]


I want to talk to ________
I stand quietly.
I look.
1
I can touch ________'s arm one time.
I wait for my turn.

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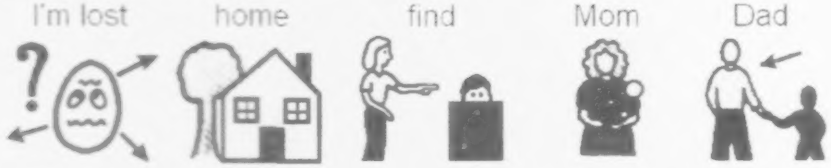
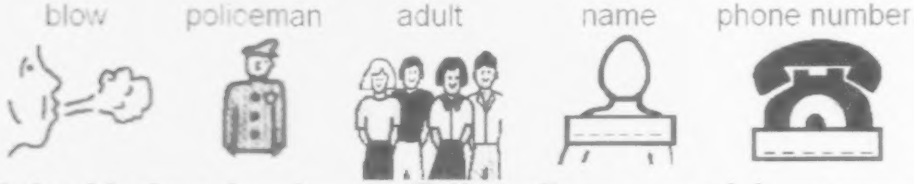
Social Script – What to do when I am lost.



I'm lost. I'm not at home. I can't find my Mom or my Dad.



I should take a deep breath. Tell a policeman or adult my name and phone number.

Use social stories

One common method for teaching social skills is the use of social stories.[49] Social stories describe social situations, and include social cues and appropriate responses written for specific situations for individual students. Social stories can be used for a variety of purposes, including:

- introducing changes and new routines
- explaining reasons for the behaviour of others
- teaching situation-specific social skills
- assisting in teaching new academic skills.

Social stories can be created by parents, teachers and other service providers. They are useful for students who have a level of cognitive functioning that allows them to understand the story. Nonreaders can listen to social stories on cassette tapes or use visual social stories. To be effective, a social story should describe a situation from the perspective of a student, direct the student to perform the appropriate behaviour and be in the voice of the student, i.e., from the "I" perspective.

The process begins by identifying student needs through observation and assessment. Once a difficult situation is identified, the author observes the situation and tries to understand the perspective of the student in terms of what is seen, heard and felt. The author then writes the story from the perspective of the student at an appropriate comprehension level, including descriptive, directive and perspective statements. Descriptive sentences provide information on the setting, activity and people involved. Directive sentences are positive statements about the desired response. Perspective statements provide a description of the possible reactions of others.

An effective format is a booklet with one or two sentences on each page. Each page should contain only one main concept.

Example

Taking turns on the computer

p. 1 If I wait for my turn on the computer, the other kids like me better. (directive)
p. 2 Everyone likes to have a turn on the computer. (perspective)
p. 3 When other kids are using the computer, I will be quiet and wait for my turn. (directive)
p. 4 When I am finished on the computer, other kids can use it. That is okay, because I know I can use it the next day. (descriptive)
p. 5 When I wait for my turn on the computer, everyone will be happy. (perspective)

There are three basic approaches for implementing social stories.[50]

- For students who read independently, stories are read twice by adults, followed by students reading them back. Then, students read them daily.
- If students do not read, stories may be recorded on a cassette tape with a signal, e.g., bell, to turn the pages. Students are taught to "read" the stories daily using symbols, drawings or photographs to support meaning.
- To incorporate modelling, stories can be videotaped. Stories are read aloud on videotape, with one page on the screen at a time.

The effectiveness of social stories can be enhanced by simultaneous use of social skills training, role-playing and other forms of direct instruction, e.g., dividing complex social skills into component skills, teaching each component individually, specifying prompts and feedback.

Teach key social rules

Understanding the basic rules associated with a given situation helps students adapt to the social context, prevents increased anxiety and reduces reliance on inappropriate coping behaviours. Students with autism spectrum disorders will likely need direct instruction in the following critical social skills.

- Waiting—Visual cues, such as objects, pictures and written words can provide concrete information to make waiting specific to a situation.
- Taking turns—This can be taught through the use of social stories as well as pictures or pictographs. It may be necessary to provide instruction and rehearsal in turn-taking activities.
- Making transitions—Using social stories and providing warnings with visual cues can help students make the transition from one activity to another. Transitions can be particularly difficult if students have not completed activities.
- Changing the topic—Some students may stay on one topic and appear unable or unwilling to talk about anything else. Visual rules, established time limits and reinforcements may help students learn when to end or change a topic.
- Finishing—Students can learn to use environmental cues, such as observing and following the behaviour of other students. It may be necessary to use timers and methods for students to check their own work.
- Initiating—Social stories combined with photographs or pictures can be particularly useful for teaching students how to approach others, make requests, enter into games, say hello and leave situations.
- Being flexible—Visual systems can be used to explain changes in a concrete way. If sequence schedules or picture routines are used, a specific picture or symbol can be removed or crossed out, and another put in its place.
- Being quiet—Visual supports may be helpful in teaching specific behaviours for being quiet, and rules for specific situations.

Use peer support

Peers can help students with autism spectrum disorders develop social skills. Teachers may need to interpret nonverbal communication or explain that a specific activity is difficult for a student, and identify what peers can do to help. This can be done informally or formally. Young children can be shown how to use specific prompts to initiate and maintain interaction with classmates with autism spectrum disorders. Peers should be reinforced for their role, just as the student with autism spectrum disorders is reinforced for social interactions. It is imperative that peers understand the impact that their attitudes, comments and actions have on other students.

Peers can help develop strategies to enhance the social competence of students with autism spectrum disorders. Pivotal Response Training (PRT) is one technique that has been successful in increasing interactions, initiation, varied toy play and language use.[51] PRT targets behaviours that are likely to affect wide areas of functioning. This approach involves teaching classmates to use strategies to:

- gain attention
- give choices to maintain motivation
- vary toys
- model social behaviour
- reinforce attempts
- encourage conversation
- extend conversation
- take turns
- narrate play.

Provide peers with information on autism spectrum disorders and tips for interacting with students with autism spectrum disorders. It is important that parents be involved in the decision to discuss their children's autism spectrum disorders. They may wish to preview materials or be involved in the presentation.

Use social skills training groups

Students with autism spectrum disorders may benefit from social skills instruction within a small-group format. There are a variety of social skills training programs and resources available.

Social skills training programs typically include assessments teachers can use to identify skills for instruction. Learning activities generally include:

- identifying the skill and skill components, and when it is used
- modelling the skill
- role-playing
- opportunities to practise
- strategies for generalization.

Although these programs are not developed specifically for students with autism spectrum disorders, they can be used in combination with appropriate adaptations and supports. There may need to be a particular emphasis on strategies for facilitating the generalization of targeted skills.

Use integrated play groups

Integrated play groups provide opportunities for young children with autism spectrum disorders to interact with their age peers and offer a natural environment for incidental teaching of social skills. Play groups provide natural situations in which children use language to express wants, practise being near other children and imitate social interactions.[52]

Teach self-monitoring skills

The ultimate goal for all students, including those with autism spectrum disorders, is to increase independent participation in a variety of environments using effective social skills. One way to increase independence in higher-functioning students is to teach self-monitoring procedures.[53] Self-monitoring involves teaching students to monitor their own behaviours in order to earn positive reinforcement. Studies indicate that in the process of collecting self-monitoring data, desired behaviours increase. The accuracy of self-monitoring may not be as important as the process and awareness it builds in students. The process for teaching self-monitoring follows.

1. Define the target behaviours that students will self-monitor.
2. Identify reinforcers that function successfully for individual students.
3. Create a self-monitoring method for students to collect data, e.g., charts, stickers or low-tech counting devices.
4. Teach students the target behaviours and how to use the self-monitoring method to record performance.
5. Increase students' independence by gradually reducing adult intervention and having students self-manage behaviours.

Support friendships

Optimally, the aim of developing specific social skills is to enable students with autism spectrum disorders to interact with others in a variety of settings, and facilitate the development of social opportunities and relationships. Students who demonstrate basic social skills may still have difficulty establishing connections with others and maintaining interactions with peers. Teachers may facilitate further social interaction by:

- helping students join school clubs and providing the support they need to participate as fully as possible
- teaching students to observe others and follow their lead
- encouraging co-operative games
- modelling how to relate and educating other students in the class
- encouraging prospective friendships
- providing enjoyment at break times

For more on facilitating peer friendships, see pages 121–123.

- doing projects and activities that illustrate the qualities of a good friend
- helping students understand emotions through direct teaching of how to read people's faces and body language, and respond to cues that indicate different emotions.

Teaching Functional Skills

One of the fundamental goals of schooling is for all students to acquire the skills they need to function as independently as possible in the world. This is especially important for students with autism spectrum disorders who also have cognitive delays, as they may have significant difficulty acquiring independent functional life skills.

For students who have needs in the area of functional skills development, goals for these skills should be identified in the students' IPPs. The same instructional approaches and strategies used for other areas can be applied to instruction in functional skills.

In the field of special education, educators have developed a variety of models for the domains of functional skills. Although these models differ in some ways, they basically include five domains:

- domestic or self-care
- functional academics
- vocational or job skills
- social, including leisure skills
- community, including travel and using services.

Schools and families should coordinate the planning of instruction for functional skills so that instruction at home and school is consistent and efficient. Some of these skills involve personal areas, so sensitivity and care should be used.

Address self-care

The kinds of instructional strategies used for communication and social skills can be applied to instruction in the areas of self-care. Students with autism spectrum disorders, particularly those with intellectual disabilities, often need direct instruction in personal hygiene, grooming and dressing. Toileting can be an area requiring significant planning and instruction. Planning meals, food preparation and even eating may be an appropriate part of students' programs. Household skills required for living independently, e.g., doing laundry, caring for clothing and cleaning, may be taught or reinforced in the school program.

Handling money and budgeting are essential skills for older students.

Identify functional academic skills

Being able to apply the basic academic skills of reading, writing and mathematics to real-life situations is another important area of functional skill development for many students with autism spectrum disorders.

In the reading domain, it is important for students to:
- recognize their names
- use simple calendars and schedules
- decode common signs, e.g., washroom signs
- follow simple written or picture sequences, e.g., recipes, task steps
- use simple maps
- match pictures and objects on the basis of labels, e.g., find objects on a shopping list.

Functional writing skills include:
- being able to sign one's name
- being able to copy from models
- having the skills to construct basic lists, e.g., shopping lists
- drawing recognizable forms.

There are several functional skills that can be taught within the mathematics domain. These include:
- being able to combine coin values, e.g., count change
- being able to hand out materials with one-to-one correspondence, e.g., ensuring there are enough placemats for everyone at the table
- grouping objects into sets of a predetermined size, e.g., placing five sheets in each package
- using calculators
- using measuring tools, e.g., measuring cups, rulers, scales
- understanding quantitative concepts, e.g., more/less, same as, bigger than, etc.

Students also need to learn how to communicate personal information, such as their names, birth dates, addresses and telephone numbers.

Address vocational skills

Students with autism spectrum disorders usually require instruction in the basic skills required for the world of work. These skills are broad and overlap with all other areas.

Independent adults need to be able to:
- be punctual and reliable in attendance at work
- follow job routines and complete duties as assigned
- understand task completion
- follow safety procedures
- accept direction and correction
- respond appropriately to persons in authority
- complete a cleanup routine
- dress in appropriate work attire and use appropriate grooming
- use job site leisure time appropriately.

Instruction in vocational skills should begin very early. Teaching young students to follow routines and complete activities independently facilitates the development of vocational skills later in life.

Consider leisure skills

Education programs for students with autism spectrum disorders often include a recreational component, because they may need help developing positive use of their leisure time. For individuals whose disabilities preclude employment, leisure activities constitute a significant part of their daily routines as adults. Families and school staff need to identify and create opportunities for meaningful participation in daily life.

Developing activities that can be enjoyed at home is also important. Some students need support and instruction for:
- using a television, stereo and VCR
- caring for pets
- playing games
- sewing, knitting or craft work
- exercise activities.

Refer to *Essential and Supportive Skills for Students with Developmental Disabilities* (Alberta Learning 1995), Book 2 of the *Programming for Students with Special Needs* series, for additional information about teaching functional life skills.

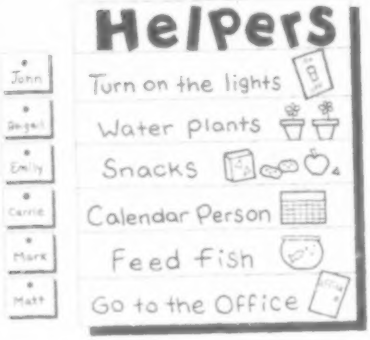
Address community skills

Safety is a major concern for many students with autism spectrum disorders. It is important to consider safety issues in planning for students as they develop independence in the community. Possible areas for consideration include:
- using public transportation
- finding community services, such as pools, recreation centres and banks
- managing pedestrian rules and understanding traffic
- using public facilities, such as washrooms
- developing restaurant skills, e.g., choosing and ordering food.

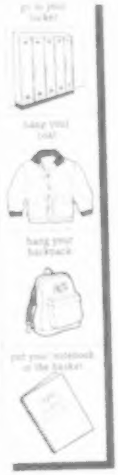
Use visuals

The following examples illustrate the use of visual strategies to support the development of functional skills related to following routines, completing self-help tasks, organizing materials and completing chores.

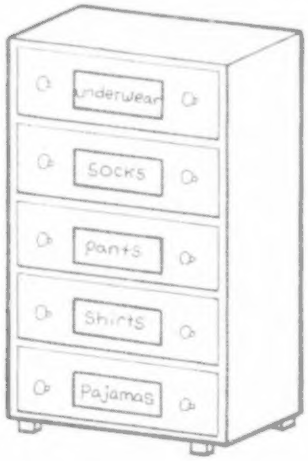
Chore Chart [54]


Helpers
John
Abigail
Emily
Carrie
Mark
Matt
Turn on the lights
Water plants
Snacks
Calendar Person
Feed fish
Go to the Office

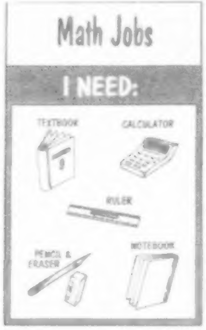
Arrival Routine [55]


go to your locker
hang your coat
hang your backpack
put your notebook in the basket

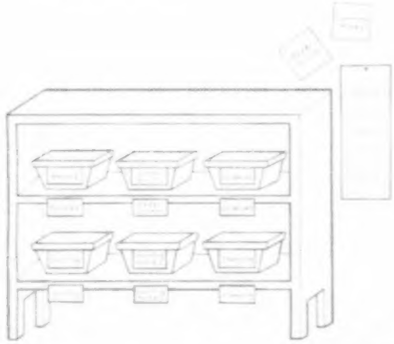
Organization [56]


underwear
socks
pants
shirts
Pajamas

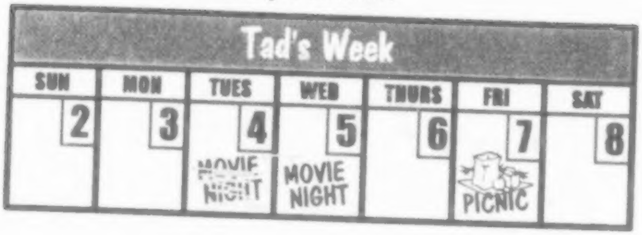
Math Supplies


Math Jobs
I NEED:
TEXTBOOK
CALCULATOR
RULER
PENCIL & ERASER
NOTEBOOK

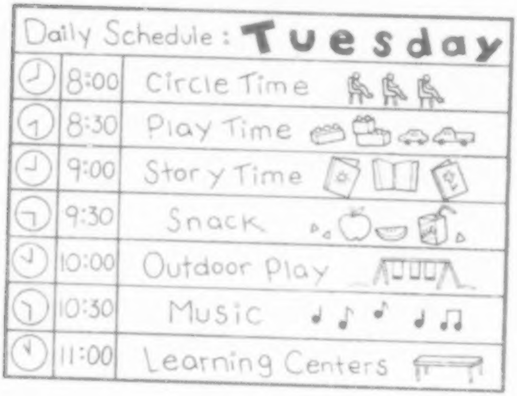
Organization [56]



Weekly Schedule


Tad's Week
SUN 2
MON 3
TUES 4 MOVIE NIGHT
WED 5 MOVIE NIGHT
THURS 6
FRI 7 PICNIC
SAT 8

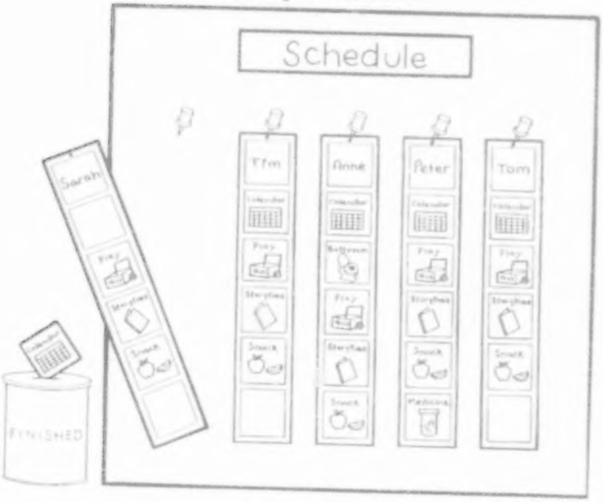
Daily Schedule [57]



Daily Schedule : Tuesday

8:00	Circle Time	
8:30	Play Time	
9:00	Story Time	
9:30	Snack	
10:00	Outdoor Play	
10:30	Music	♩ ♪ ♩ ♩ ♫
11:00	Learning Centers	

Group Schedule [58]


Schedule
Sarah
Play
Storytime
Snack
Calendar
FINISHED
Tim
Calendar
Play
Storytime
Snack
Anne
Calendar
Bathroom
Play
Storytime
Snack
Peter
Calendar
Play
Storytime
Snack
Medicine
Tom
Calendar
Play
Storytime
Snack

Chapter 6: Managing Challenging Behaviour

"… a behavioral support plan is a document that is designed to change the behavior of adults with the expectation that if adult behavior changes, the behavior of the student will change."

Horner and Sugai, 1999

The purpose of a behaviour may be:
- *to gain attention*
- *to escape/avoid*
- *to get something*
- *regulation*
- *play.*

Durand and Crimmins, 1988

Students with autism spectrum disorders often demonstrate unusual and challenging behaviours, and they do not always respond to methods of discipline employed in the classroom environment. To implement effective instructional activities, it may be necessary to first focus on managing student behaviour. Behaviour problems are often the primary concern of teachers and parents, because they disrupt the learning of all students in the class, and harmony in the family. It may be necessary to develop systematic plans for changing behaviour.

It is important that behaviour intervention plans be based on an understanding of the characteristics of autism spectrum disorders, as well as knowledge of the strengths and needs of individual students. Understanding that all behaviour has a communicative function is essential in developing successful intervention plans.

Behaviour intervention plans should be developed through a collaborative problem-solving process involving all the significant people in students' lives, including parents, classroom teachers, special educators and teacher assistants. The process may also include others, such as principals, psychologists, behaviour consultants, speech-language pathologists and occupational therapists. It is critical that final plans take into consideration the space, materials and staffing resources available in the classroom. Plans will only be effective if they are implemented on a consistent basis. If a student requires a specific type of intervention, e.g., providing a tangible reinforcement on a half-hour basis, it may be necessary to brainstorm creative ways to incorporate the intervention without disrupting the classroom routine, e.g., having the student leave the room when it is time for the reinforcement.

Positive Behavioural Supports

The theoretical framework of Positive Behavioural Supports (PBS) should be used when developing behavioural intervention plans. Positive behavioural support plans begin with a functional behavioural analysis (FBA). The purpose of an FBA is to identify those conditions that trigger or maintain challenging behaviour, as well as conditions associated with desirable behaviours. The emphasis in a positive behavioural support plan is prevention, accommodation and teaching appropriate behaviour.

Functional behavioural analysis typically involves the following steps.[59]

1. Determine which behaviour to target.
2. Identify the function of the behaviour and contributing factors.
3. Identify an alternative behaviour.
4. Identify strategies to increase positive behaviours.
5. Identify strategies to decrease negative behaviours.
6. Develop behaviour intervention plans.
7. Evaluate behaviour intervention plans.

A functional behavioural analysis can be conducted formally over a period of several days or in a less-formal problem-solving or brainstorming process completed in one session.

1. Determine which behaviour to target

If students have a variety of challenging or disruptive behaviours, it will be necessary to establish priorities and determine which behaviour to address first. It is difficult to try to reduce several negative behaviours at the same time. It is also critical to determine whether a specific behaviour is truly problematic. When establishing priorities, consider the following.

- Is the behaviour life threatening?
- Does the behaviour significantly interfere with learning?
- Is the behaviour dangerous to others?
- Does the behaviour damage materials?
- Does the behaviour interfere with social acceptance?
- Has the behaviour been an issue for some time?

2. Identify the function of the behaviour and contributing factors

The function or purpose of a behaviour is not always obvious. It is often necessary to "play detective" and conduct a functional assessment. Functional assessment is based on the premise that all behaviour serves some purpose. Observed behaviour is often the tip of the iceberg and a direct result of underlying issues and/or deficits. For instance, students with autism spectrum disorders may display observable behaviours, such as inappropriate screaming that are related to underlying factors, such as an inability to modulate sensory arousal, limited attention seeking skills, a desire for intense auditory feedback, limited impulse control and/or boredom or frustration with the current activity.

Because students with autism spectrum disorders often have significant difficulty expressing their thoughts and desires in an effective manner, it is important to consider the potential communicative function of a specific behaviour. For instance, the purpose of a negative behaviour may be:

- to gain attention
- to communicate a need or want
- to gain a tangible consequence
- to escape from an unpleasant situation
- to gain a sensory consequence
- to self-regulate
- to make a comment or declaration
- to release tension
- out of habit.[60]

Information for functional assessments can be found through:

- a review of students' records
- interviews with people knowledgeable about students, such as teacher assistants or family members
- observation and recording behavioural data.

Frequent communication with students' families may provide valuable information. School staff and families often develop a communication system, such as a daily communication log or book that travels to and from school with students. Information provided by the family may be extremely useful in identifying the function of challenging behaviour.

Frequently it is necessary to employ a more structured approach to a functional behavioural assessment. Two common approaches involve the ABC method and the use of an assessment instrument such as the Motivation Assessment Scale.

ABC method

Consider the ABCs, i.e., the antecedents, behaviours and consequences associated with the behaviour.

- Antecedents are the time, people, places or events in the environment that are present prior to the target behaviour. Antecedents can include "slow triggers," technically known as setting events, that increase the probability of the behaviour occurring, and "fast triggers," events that seem to immediately precede the behaviour in a predictable pattern.

- Antecedents can be categorized into fast triggers or slow triggers.
  - Fast triggers are events with a discrete onset and end point that appear to provoke or prompt a specific behaviour in an immediate fashion, e.g., loud noises, a specific task, a specific direction, taking something away, etc.
  - Slow triggers are events that do not occur immediately prior to the behaviour but appear to make the individual more likely to demonstrate a specific behaviour, e.g., medical issues, change in routine.
- Behaviours
  - Include the frequency, intensity and duration of the behaviour.
  - Be specific, for example, screaming can vary in intensity and duration, and may or may not be a behaviour to target if the intensity is mild.
- Consequences are events that occur directly after the behaviour. It is important to consider two different types of consequences:
  - planned consequences imposed after negative behaviour
  - unplanned consequences, i.e., actual events that take place after a behaviour is displayed. For instance, a teacher may decide to withdraw attention from a student who is swearing (imposed consequence), while peers may laugh at the student (actual event). Often, it is the unplanned consequences that have the most significant impact on the behaviour.

The following chart demonstrates what a functional behavioural analysis might look like. The example involves a hypothetical junior high school student with Asperger's Disorder. In this example, the student has daily outbursts severe enough to disrupt the classroom atmosphere and as a consequence, the student is being excluded from a number of classes.

See Appendix I, page 186, for a blank Behaviour Observation and Data Collection Chart.

Antecedents	Behaviour	Consequences
Fast triggers: • Teasing by classmates • Timed tests • Tasks that involve considerable writing • Open-ended writing or thinking activities • Receiving less-than-perfect marks Slow triggers: • Lack of organizational skills • Lack of impulse control • Is unable to read social situations • Has difficulty with abstract or metaphorical language • Lack of fine motor skills	• Verbally abusive – screams obscenities – threatens to harm others • Refuses to complete work • Walks out of class	• Warning from teacher • Increased teasing by peers • Removal from classroom/school • 1:1 talks from teacher/T.A./administrator • Tasks are not completed

Recording the ABCs associated with a specific behaviour often helps one identify:

1. When and where does the behaviour typically occur?
2. Under what circumstances does the behaviour typically not occur?
3. What is going on in the setting when the behaviour typically occurs?
4. Who is generally involved or near the student when the behaviour typically occurs?

This information helps the team to build hypotheses or theories about the possible function that the problematic behaviour might be serving for the student. In the example provided above, it is likely that the student's outbursts serve the function of allowing him to avoid tasks that he perceives to be excessively difficult. Support for this theory is based on the demonstration of the relationship between certain kinds of tasks, e.g., those that require considerable writing as well as open-ended assignments, and the occurrence of the target behaviour. Additional support is provided by knowing the events or conditions associated with the behaviour. Understanding the function of the behaviour in terms of environmental events allows the team to choose interventions that are within their control and have a high probability of success.

See Appendix J, pages 187–188, for a copy of the Motivation Assessment Scale (Durand and Crimmins, 1988).

Motivation Assessment Scale

The Motivation Assessment Scale helps determine whether a specific behaviour is displayed to gain specific sensory feedback, attention or a tangible reward, or to avoid nonpreferred tasks.

Whatever method of data collection is chosen, it is important to note that a student may display the same behaviour in different situations for different reasons. The function of behaviour may also change over time. In the example of the hypothetical junior high school student, it is likely that the function of the behaviour is avoidance of tasks that he finds difficult. However it may also be possible that in some situations, the behaviour might be reinforced by the individual attention from an adult that occurs immediately after an outburst. Therefore, it is important for the process of behavioural analysis to be ongoing. It is critical to continually revisit the analysis and adapt approaches as necessary.

3. Identify an alternative behaviour

The functional assessment of behaviour provides a foundation for developing behaviour plans. The success of behaviour plans often depends more on instructional and proactive strategies than on reactive strategies.

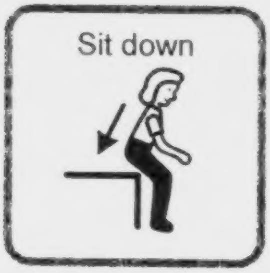
Once the purpose of a behaviour has been determined or hypothesized, it is possible to identify an alternative, more appropriate behaviour that serves the same function. For example, if a student pushes materials off of his desk and onto the floor to avoid a task that is too difficult, the student may need to be taught a more acceptable way to reject or postpone nonpreferred activities, or be taught to ask for assistance in an appropriate way.

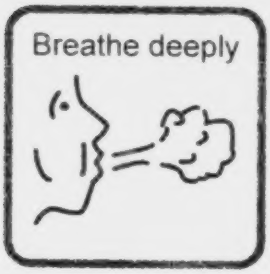
The focus of behaviour intervention should be on instruction rather than discipline. The goal is to increase students' use of alternative, more appropriate means of achieving the same purpose. Alternative behaviours are usually more effective ways to communicate or interact with others.

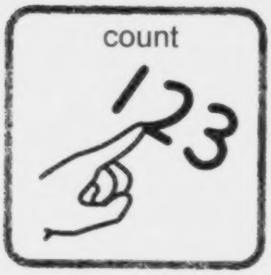
It cannot be assumed that students have the skills necessary to engage in alternative behaviours. Systematic instruction and reinforcement are usually necessary. In most situations, teaching alternate behaviours needs to be combined with other positive program strategies.

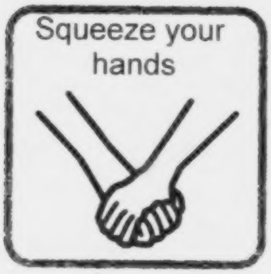
The following examples illustrate the use of visual strategies to teach anger management strategies and relaxation techniques.

Anger Management Strategy [61]




Breathe deeply




Squeeze your hands

Relaxation Techniques [62]

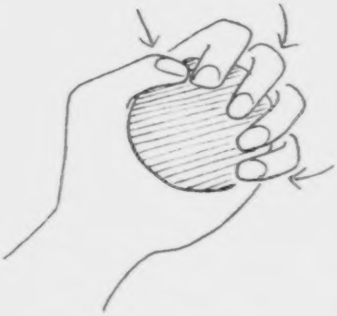
My Relaxation Book

Place child's picture here.

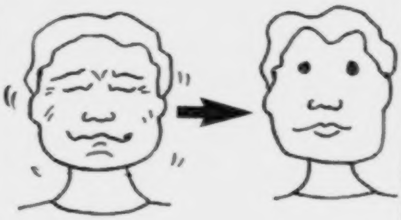
Name: ____________________

1. Hold the ball and squeeze tight.

Now let go, relax.....

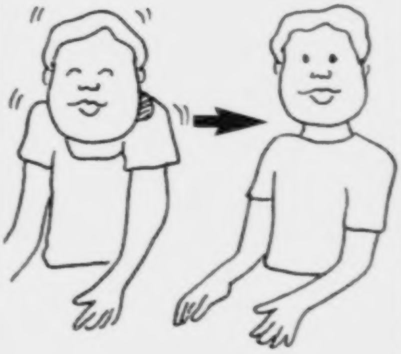


2. Make a "monster" face.



Now let go, relax.....

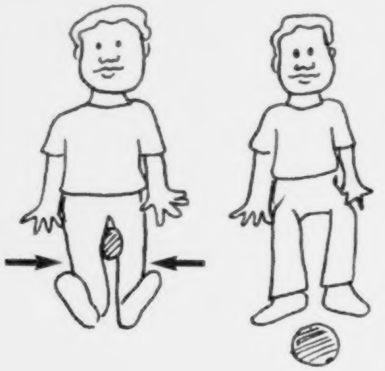
3. Squeeze the ball with your shoulders.



Now let go, relax.....

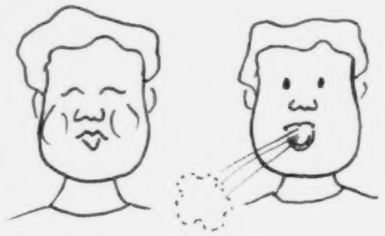
Relaxation Techniques (continued) [62]

4. **Squeeze the ball with your knees.**



Now let go, relax.....

5. **Now hold your breath.**



Blow out and relax.....

6. **Now you are nice and relaxed.**

I did a good job.

______________________________.

4. Identify strategies to increase positive behaviours

Adapt the environment

Problem behaviours can often be reduced or eliminated by making changes in the physical environment or classroom routine. The assessment and analysis of a behaviour may indicate that the behaviour tends to occur within specific areas, during specific activities, under certain conditions or during interactions with certain individuals. Sometimes, making environmental accommodations minimizes the likelihood of the behaviour occurring. However, this does not mean that the entire classroom or routine should be radically changed to accommodate a single student. In many cases, minor adaptations can significantly impact behaviour.

Possible environmental adaptations include:

- removing distracting stimuli
- decreasing sensory input
- incorporating daily sensory experiences that are calming
- making changes in physical arrangements
- providing a clear and predictable schedule
- scheduling relaxation times or exercise breaks before difficult situations
- alternating demanding tasks with those that are easier
- providing choices
- providing frequent access to favourite activities and peers
- designating a place for students to relax.

For more on strategies for addressing sensory issues, see pages 54–59.

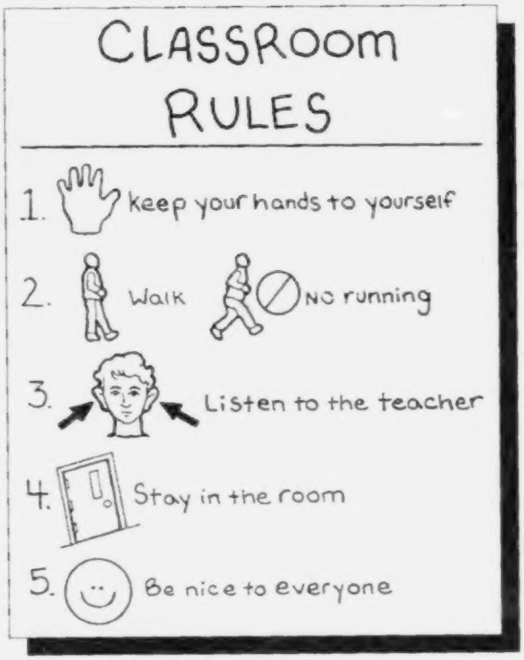
Use positive/proactive approaches

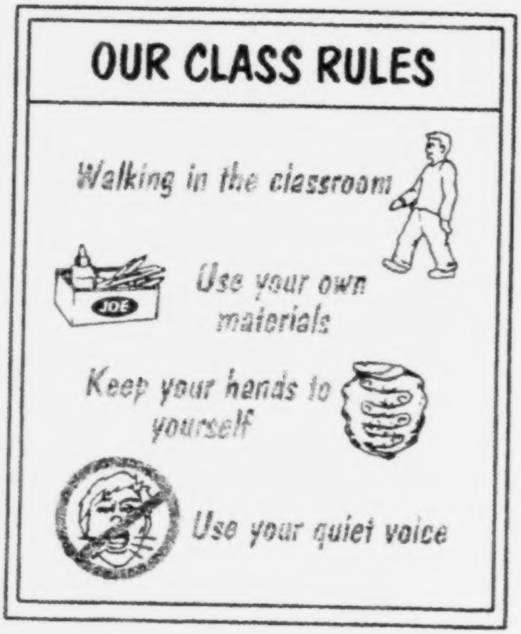
It is generally more effective for teachers to emphasize the development of positive behaviours than the elimination of negative behaviours. Components of a positive approach include:

- teaching essential communication skills based on the ability of the individual student, e.g., requesting, rejecting, protesting, etc.
- teaching social skills that are not readily picked up by observing others
- identifying functions of maladaptive behaviours and teaching appropriate replacement behaviours
- providing visual supports to clarify instructions, and teach new concepts and skills
- using social stories to teach behaviour for situations that are problematic

- providing clear schedules and using them to prepare students for transitions and changes
- teaching students to make choices and providing opportunities for choice
- providing instruction at an appropriate level for individual students
- monitoring students' responses to the environment and adapting it as necessary
- rewarding appropriate behaviour with reinforcements that are meaningful to individual students
- teaching relaxation techniques
- fading prompts to increase independent functioning
- providing clear expectations for behaviour
- using appropriate visual aids to help students understand expectations.

Examples follow.


CLASSROOM RULES
1. Keep your hands to yourself
2. Walk
No running
3. Listen to the teacher
4. Stay in the room
5. Be nice to everyone


OUR CLASS RULES
Walking in the classroom
JOE
Use your own materials
Keep your hands to yourself
Use your quiet voice

It may be helpful to monitor students for signs of increasing anxiety and identify the environmental factors that may be associated. For example, if social play increases stress, it might be helpful to provide opportunities for isolated play. This does not mean that the program should forego the goal of increasing interactive play with peers. However, the amount of time spent with others may need to be reduced if a student is anxious. Over time, contact with other students can be increased in the context of a program that teaches social skills and provides support in interactive situations.

Use reinforcement strategies

It is often necessary to develop an incentive or reinforcement system to motivate students to display appropriate behaviours and/or refrain from displaying maladaptive behaviours. It may be helpful to consider, "What is the pay-off for participating in this activity?" If there are no obvious pay-offs from the student's perspective, it may be necessary to devise one.

In order to be effective, selected reinforcers or rewards must be appealing and motivating to students. However, what is motivating for one student may not be motivating to another. The appeal of a specific reward may wane over time, so it may be necessary to rotate or change rewards on a regular basis. Some students respond positively when they know exactly what they are working for, while others are more motivated by earning surprise rewards. It is often effective to present a menu of reinforcers and allow students to select ones they would like to work for.

See Appendix F, page 183, for a Likes and Dislikes Chart and Appendix G, page 184, for a Checklist of School Reinforcers.

There are several types of reinforcement. They include:

- social reinforcement—providing students with positive attention
- activity/privilege reinforcement—providing students with opportunities to engage in preferred activities
- material or tangible reinforcement—providing students with desired items.

Generally speaking, social reinforcement is considered the most natural form of reinforcement, while food reinforcers are considered the least. Food rewards are often difficult to implement in the classroom environment because the other students also want treats. When designing a reinforcement program, it is important to identify the most natural form of reinforcement that is powerful enough to motivate students to display positive behaviours and/or refrain from displaying negative behaviours. With very young children, particularly those with complex developmental and behavioural needs, it may be necessary to initially provide students with food rewards or opportunities to engage in stereotypic or self-stimulatory behaviours. Although the ultimate goal is to reduce the frequency of stereotypic behaviours and fade the use of edible reinforcers, they may be necessary during the initial phases of teaching. As students' skills develop and interests broaden, it may be possible to implement more natural forms of reinforcement. Prior to using food rewards, complete a reinforcement inventory to identify other possible reinforcers.

Praise students when presenting reinforcers. It is important to remember to be as specific as possible when praising. Telling a student "I like the way that you are sitting in your desk" is much more informative than saying he or she is "being good."

Once effective reinforcers are identified, teachers must decide how and when to provide students with reinforcement. Reinforcement strategies can be broadly grouped into three categories: reinforcing students for displaying positive behaviours, reinforcing students for refraining from displaying negative behaviours, and token economies.

- Reinforcement for displaying positive behaviours
  - Students receive reinforcement each time they display specific positive behaviours.

    Example: A student hands a "break" picture symbol to the teacher and is given an opportunity to listen to music as reinforcement for communicating the need for a break in an appropriate manner.

- Reinforcement for refraining from negative behaviours[64]
  - Students receive reinforcement for refraining from displaying targeted negative behaviours for a predetermined period of time.

    Example: A student is given a checkmark if he or she refrains from screaming for five consecutive minutes. Each time the student screams, a timer is reset. When the student earns 10 checkmarks, he or she is given an opportunity to listen to music on a walkman.

  - Students receive reinforcement for refraining from displaying targeted negative behaviours during a specific task.

    Example: The student receives a sticker for refraining from aggressive behaviours throughout the morning circle.

  - Students receive reinforcement for displaying low rates of targeted negative behaviours.

    Example: A student is provided with five computer picture symbols at the start of math class. Each time he or she screams, a picture symbol is removed. The student is provided with an opportunity to play on the computer if he or she has at least one picture symbol left at the end of the class. Over time, the number of picture symbols provided at the start of the class is gradually reduced.

- Token economies
  - Students receive tokens, e.g., poker chips, pennies, for displaying appropriate behaviours and tokens are removed when negative behaviours are displayed. Earned tokens are cashed in for preferred items and activities.

    Example: A student is provided with a penny each time he or she communicates with others using an "inside voice." A penny is removed from the bank each time he or she screams. At the end of the day, the student is given an opportunity to buy computer time. The student is "charged" one penny per minute of computer time.

As students experience success, efforts should be made to fade reinforcements. This can be accomplished by:
- using more natural forms of reinforcement
- increasing expectations
- reducing the size or amount of reinforcements provided.

The need for external reinforcers is greatly reduced when the student is engaged in an activity that he or she is interested in and/or competent at. While it takes effort and creativity to identify and structure activities that engage the interest of students with autism spectrum disorders, these efforts can result in much improved learning and a reduction in challenging behaviour.

Help students develop self-control

Instruction may need to focus on the development of anger-management and self-control strategies. Using social stories to teach self-control in specific situations has proved useful for students with autism spectrum disorders.

Another visually based approach for teaching self-control is Cognitive Picture Rehearsal.[65] This strategy uses visual supports in an individualized program. Pictures and scripts for a sequence of behaviours are presented, and students are given opportunities for repeated practice of the behaviours, with immediate reinforcement. The general process follows.

1. Identify the behaviours to be reduced, e.g., screaming in response to loud noises.
2. Identify the antecedents to the undesirable behaviours, e.g., loud play in the gym, and provide students with appropriate alternative ways to cope with the antecedent condition, e.g., putting on headphones to dull the stimuli.
3. Identify reinforcers that follow the appropriate behaviour, e.g., a special treat at the end of gym class.
4. Provide students with pictorial or photographic representations of this chain of events and give instructions using these pictures so students are familiar with the sequence of antecedents, behaviours and reinforcers.
5. Rehearse this sequence before going into stressful situations. Reinforce the sequence with pictures.
6. Use the sequence in situations where there are problems with self-control and keep the pictures close by so they can be referred to on an as-needed basis.

For strategies to promote independence and self-monitoring, see pages 46–48, 77.

5. Identify strategies to decrease negative behaviours

Identify the least restrictive or aversive strategy

Negative consequences should never be implemented until it has been demonstrated that positive forms of programming are ineffective. It is important to document the effectiveness of all behavioural methods to justify the use of alternative measures. Interventions should always be designed and implemented in manner that is safe for students and staff, and which respects the dignity and basic rights of students. Parents should always be included in discussions and decisions regarding the use of negative consequences.

Positive programming strategies that focus on increasing student competence, and making necessary accommodations to physical settings, materials and instruction are the most successful in facilitating long-term behavioural change. However it is sometimes necessary to design planned reactions to behaviours to maintain order and safety in the classroom. Reactive or consequence-based interventions should never be implemented in isolation. It is important to also implement complementary reinforcement programs to motivate students to refrain from negative behaviours.

It is essential that everyone involved is prepared to react to specific behaviours in consistent ways and with the same consequences. Staff responsible for carrying out plans require skills and knowledge about behavioural principles. In general, there are three major types of reactive techniques:

- ignoring the behaviour
- redirection
- removal from reinforcements or time out.

Planned ignoring of problem behaviours may be appropriate for minor behaviours. Gaining attention may be the motivation for the behaviour, so reacting may actually encourage it. If the behaviour seems to serve the function of gaining attention, students may need to be taught how to gain attention in appropriate ways. Ignoring may be difficult to implement in a classroom setting, particularly if the behaviour is disruptive to learning. It is important to ensure that students are not being inadvertently reinforced by other sources, such as peers.

Redirection is a vital component of any behaviour intervention plan. If a behaviour is unacceptable, students need to know what is expected instead, and expectations must be communicated clearly. The use of visual aids, such as pictographs, are often helpful. Redirection is used in combination with positive programming strategies. Students need to be taught appropriate alternative behaviours, and be given opportunities to practise them.

Removal from reinforcements is sometimes referred to as time out. Time out can be an effective behaviour management strategy when used effectively and incorporated into an overall plan to promote the development of desirable behaviours. If a student is anxious or upset, it may be necessary for the student to leave the situation to calm down before any redirection or teaching of alternative behaviours can occur. This approach can be combined with positive programming strategies, such as teaching students to recognize when they are becoming anxious, and teaching them to independently remove themselves from situations before they lose control of their behaviour. Because removal from the learning environment is a restrictive and serious form of intervention, it should only be used when less restrictive interventions have proved ineffective. Time out should always be used cautiously and the process should be carefully documented.

There are two basic types of time out.

- Time out within the classroom—The student is removed from an activity or group in a manner that allows him or her to continue to observe, but not actually participate in the activity.
- Time out outside the classroom—The student is removed from a group or activity in a manner that does not allow him or her to observe or participate in the group activity. The time out may involve directing the student to the hallway outside the classroom or to a separate area. To ensure safety, it is critical that the student be monitored and supervised throughout the duration of a time out.

It is important to note that many students with autism spectrum disorders prefer to be isolated. As such, some students may purposely engage in negative behaviours to avoid group situations and structured tasks. Generally speaking, time-out consequences are only effective when students feel that they are missing out on positive experiences during the time out.

Time-out procedures should be clearly outlined in the students' individualized program plans and/or behaviour plans and communicated to them, to their parents and to administrators. Seek permission from administrators and parents prior to implementation. It is critical to evaluate the effectiveness of the procedure on a regular basis.

Consequences such as time out should never be used it isolation. It is important to develop a comprehensive behaviour management plan that is structured around positive behavioural supports to motivate students to display appropriate behaviours and refrain from less desirable behaviours (see examples of support plans at the end of this section).

Crisis management interventions

The best way to deal with a crisis is to plan well to prevent one. However, some students with autism spectrum disorders can become very agitated. In such cases, it may be necessary to have a crisis management intervention plan ready. All staff working with the student and perhaps other students in the class should be aware of and understand the plan. This crisis plan will ideally be developed by the whole planning team, including family members. The plan may include:

- a description of the signals that indicate that a crisis situation is developing
- a strategy for preventing injury to the student, peers and staff in all settings in which a crisis may occur
- a list of steps in the intervention to match each step of the escalating behaviour problem
- provision of appropriate training for staff who will carry out the plan, with opportunities to practise the interventions required
- record keeping, for monitoring use of the crisis plan and evaluating its effectiveness.

It may be appropriate to allow students to engage in repetitive, stereotypical behaviours in stressful situations, as this behaviour may be a coping mechanism. Although the goal may be to teach more appropriate means of dealing with stress, repetitive behaviour is preferable to aggression.

Physical intervention is not a behavioural management strategy—it is a crisis management technique. Physical interventions are not designed to reduce the frequency or severity of negative behaviours but to ensure the safety of students. These interventions should only be used in emergency situations where safety is an issue. Teachers should consult with administrators to determine which interventions are approved for use in their jurisdiction, what training is available and what documentation is required. Only staff who have received specific training should attempt to implement physical interventions.

Dealing with repetitive behaviours

Repetitive behaviours are often a concern to parents and teachers. However, as one parent of a student with autism spectrum disorders said, "Pick your battles." It may not be an appropriate use of instructional time and effort to try to eliminate a particular repetitive behaviour in light of the many other things students need to learn. These behaviours cannot be totally eliminated but they may be reduced and, in some situations, replaced with more suitable alternatives. Repetitive behaviours, such as rocking and spinning, may serve an important function for students. If students use repetitive behaviours to calm down, it may be appropriate to teach other methods of relaxation that provide the same sensory feedback. For some students, it may be appropriate to find other sources of stimulation to satisfy sensory needs. It may be necessary to provide students with time and space to engage in repetitive behaviours until appropriate calming strategies are developed.

High rates of repetitive behaviour or a sudden increase in these behaviours should serve as a signal that might indicate that the student is experiencing difficulties that he or she cannot communicate.

Consider these suggestions for reducing or replacing repetitive behaviours.

- Teach alternative behaviours that are related, but more socially acceptable.
- Provide a variety of sensory experiences during the day.
- When the behaviour is occurring, try to divert attention to another activity.
- Negotiate when and where repetitive actions are acceptable. Controlled access may reduce desperation to engage in the activity, and should be scheduled rather than contingent upon good behaviour.
- Gradually reduce the amount of time allotted for the behaviours.
- Use the level of repetitive behaviours to assess students' levels of stress.
- Allow students to engage in the behaviours to calm down in emergency situations.
- Collect data on the frequency and/or intensity of repetitive behaviours throughout the day. Use this information to plan interventions.

6. Develop behaviour intervention plans

Once the team has identified behaviours that need intervention and the contributing factors, desired alternative behaviours, and strategies for instruction and management, interventions can be planned. These plans should be included in students' IPPs.

Written plans should outline the goals for behaviour change, environmental adaptations, positive program strategies and reactive strategies, so that all those involved can maintain a consistent approach. This is particularly important for maintaining consistency between home and school, in environments throughout the school and for situations in which on-call staff are working with students.

Establish review dates for behaviour goals and develop a process to evaluate the effectiveness of intervention plans.

For students in inclusive settings, it is important to consider how plans will be implemented without disrupting other students, stigmatizing students with autism spectrum disorders or taking resources away from other members of the class. Consider these suggestions.

- Develop subtle reinforcement programs that will not attract the attention of other students, e.g., have a chart on the teacher's desk or student's desk.
- Deliver reinforcements outside of the classroom or when other students are not present.

- Ask parents to provide reinforcements outside school hours.
- Use similar strategies with the whole class or with other students who have behaviour management issues.

If a behaviour appears to be motivated by a desire to seek attention, it is often necessary to enlist the cooperation of classmates to ensure that attention is minimized when a student acts out. Explanations can be provided in a matter-of-fact manner without disclosing personal information, e.g., "Billy thinks we find it funny when he makes noises, so it is important that we do not laugh or smile when he does so." It may be necessary to debrief classmates following severe behavioural outbursts to allay fears and concerns.

7. Evaluate behaviour intervention plans

When evaluating the effectiveness of behaviour intervention plans, consider the following.

- Are interventions being implemented consistently at school and at home?
- Do they need to continue for longer periods of time? (Have they had sufficient time to work?)
- Do minor adjustments need to be made?

- Is the target behaviour being maintained through factors that were not accounted for?
- Do reinforcements need to be modified?
- Are alternative strategies needed?

Behaviour plans vary in complexity depending on the nature of the problem. Some plans include detailed descriptions of the behaviour; environmental manipulations; cueing strategies; type, frequency and schedule of reinforcement; and data collection procedures. Other plans include more general descriptions of these components.

See Appendix K, pages 189–191, for a blank Behaviour Support Plan.

Two sample behaviour support plans follow. The first outlines a behaviour management plan for an elementary school student in an inclusive classroom and the second summarizes the support plan for a junior high student.

Behaviour Support Plan

Re: Mike (Elementary Student)

Objective: To ensure that staff working with Mike are aware of behaviour support procedures in place to maintain a healthy environment for Mike, other students and staff.

Rationale: Mike, on occasion, will display aggressive behaviours, e.g., hitting, toward the teacher assistant.

Key Understandings About: Mike

- Mike finds afternoons quite difficult (he tends to display better coping skills in the morning).
- Mike has difficulty coping with change.
- Academic demands tend to raise Mike's anxiety.

Plan:

- ▶ Staff working with Mike will read and sign this plan.
- ▶ Be aware of antecedent events. This behaviour is most likely to occur when:
  - Mike is presented with a math task
  - Mike is agitated
  - other students use the computer.
- ▶ Be aware of warning signs (escalating behaviours)
  - Mike starts to twitch.
  - Mike drops to the floor.
  - Mike starting humming.
  - Mike bites his sleeve.

These behaviours are communicative in nature and indicate that Mike is having difficulty.

- Immediate measures (list plans to diffuse the situation)
  - When warning behaviours are displayed, a picture symbol depicting a bean bag chair will be placed in his hand.
  - Mike will be directed to sit in the bean bag chair.
  - The teacher assistant will ensure that she is out of Mike's reach to ensure her own safety.
  - Mike will be presented with two different options for a break.

- Implement positive behaviour supports (describe proactive strategies to use consistently to support students that increase their abilities to communicate their wants and needs, and that teach alternative, more acceptable responses to frustration).
  - Place Stop sign on door to discourage Mike from running out of class.
  - Introduce bean bag chair into classroom as a calming area.
  - Schedule time to practise calming routine with bean bag chair.
  - Provide Mike with a water bottle with a straw as oral activities often have a calming effect on him.
  - Modify Mike's work to ensure he is successful.

- Help peers learn to:
  - understand autism spectrum disorders by reading an age-appropriate book on the topic
  - recognize Mike's warning behaviours
  - refrain from taunting Mike when it is their turn to use the computer.

- Staff will (include any other measures that staff need to take):
  - refrain from lifting or carrying Mike
  - ensure they always have the picture of the bean bag chair handy
  - ensure that Mike clearly understands when his next turn on the computer will be.

- Reactive Plan—In spite of proactive strategies, if aggressive or unsafe behaviour occurs, the following plan is in place (list a plan for dealing with escalating behaviour that includes steps and staff responses for each level of escalation).
  - The teacher assistant will alert the teacher when Mike is directed to the bean bag chair to calm down (in case assistance is required).
  - The teacher assistant will verbally debrief with Mike when he is calm and then resume the daily routine.
  - Mike's parents will be notified if the incident is serious.

I have read this plan and am aware of support procedures to be followed when working with Mike.

Note: A copy of this plan should be kept in the office and be read by school personnel before they begin working with the student.

Team members' signatures:

Date:

Review date:

Behaviour Support Plan

Re: Sonny (Junior High Student)

Objective: To ensure that staff working with Sonny are aware of behaviour support procedures in place to maintain a healthy environment for Sonny, other students and staff.

Rationale: Sonny, on occasion, will display aggressive behaviours, e.g., hitting others, and destructive behaviours, e.g., throwing furniture, when he is upset.

Key Understandings About: Sonny

- Sonny gets physically aggressive when anxious or upset.
- Taunting and teasing make Sonny anxious.
- Perceived academic pressures raise Sonny's anxiety.
- Sonny wants to have friends and be respected for his vast knowledge of video games and computers.

Plan:

▶ Staff working with Sonny will read and sign this plan.

▶ Be aware of antecedent events. This behaviour is most likely to occur when:
- Sonny is presented with a new assignment
- Sonny hears raised voices (he is sensitive to sounds)
- Sonny thinks other students are making fun of him
- Sonny does not understand the meaning of what another student says to him.

▶ Be aware of warning signs (escalating behaviours)
- Sonny starts talking to himself.
- Sonny begins to pace.
- Sonny approaches the student he believes is teasing or taunting him.
- Sonny reaches for a desk or another piece of furniture.

These behaviours are communicative in nature and indicate that Sonny is having difficulty.

▶ Immediate measures (list plans to diffuse the situation)

- Sonny will be given a problem-solving card with relaxation choices, e.g., breathe deeply, go get a drink, don't react.
- *Other students* will be removed from the vicinity.
- Once Sonny has calmed down, he will create a plan outlining upcoming activities, with assistance.

▶ Implement positive behaviour supports (describe proactive strategies to use consistently to support students that increase their abilities to communicate their wants and needs, and that teach alternative, more acceptable responses to frustration).

- Problem-solving strategies will be practised and recorded on a cue card.
- Relaxation strategies will be selected, practised and recorded on a cue card.
- Sonny will be involved in creating a social story dealing with teasing.
- Sonny will be rewarded when he handles a tough situation.
- Sonny will be given the opportunity to practise new work in a group setting and be successful before being asked to do it on his own.
- Sonny's work will be modified to ensure he is successful.
- Sonny will be given specific daily goals regarding academic and behaviour expectations.
- Sonny will work toward having free time at the computer.
- Sonny will be given the opportunity to share the games and programs he creates with other students.

▶ Help peers learn to:

- understand that Sonny may not comprehend their intentions
- reduce their joking and teasing
- include Sonny in their activities.

▶ Staff will (include any other measures that staff need to take):

- supervise Sonny during lunchtime
- invite Sonny to join one lunchtime club
- offer Sonny choices about how he wants to demonstrate his knowledge and learning.

▶ Reactive Plan—In spite of proactive strategies, if aggressive or unsafe behaviour occurs, the following plan is in place (list a plan for dealing with escalating behaviour that includes steps and staff responses for each level of escalation).

- Sonny will be asked to leave class and an adult will walk with him.
- Sonny will go to the nurse's office to calm down.
- Once calm, Sonny will be prompted to represent his interpretation of the incident through drawing. With assistance, Sonny will identify another way of dealing with similar incidents (previously practiced problem-solving strategies).
- Sonny will be assisted in developing a plan for restitution, if necessary.
- Sonny's parents will be notified if the incident is serious.

I have read this plan and am aware of support procedures to be followed when working with Sonny.

Note: A copy of this plan should be kept in the office and be read by school personnel before they begin working with the student.

Team members' signatures:

____________________ ____________________
____________________ ____________________
____________________ ____________________
____________________ ____________________

Date:

____

Review date:

____

Chapter 7: Facilitating Inclusion

Inclusion refers not merely to setting but to specially designed instruction and support for students with special needs in regular classrooms and neighbourhood schools. Instruction, rather than setting, is the key to success and decisions related to the placement of students are best made on an individual basis in a manner that maximizes their opportunity to participate fully in the experience of schooling. Inclusion is also called integration or mainstreaming. There is much evidence to suggest that students with autism spectrum disorders can benefit from integration with typical peers.[66]

Teacher Preparation

One of the most effective ways teachers can prepare for the inclusion of a student with autism spectrum disorders is to develop an understanding about the disorder by obtaining accurate information. Having access to accurate information fosters understanding and facilitates a positive attitude toward the challenge of including a student with autism spectrum disorders. Sources of information include:

For more information on resources, see pages 193–201.

- parents
- books and articles
- Alberta Learning resources, e.g., *Programming for Students with Special Needs* series
- specialists or consultants providing service in your jurisdiction
- Internet resources
- provincial and local organizations, such as the Autism Society of Alberta, Edmonton Autism Society, Autism Society Central Alberta or Autism Calgary Association.

It is also important to gain knowledge about effective inclusion strategies. This can be achieved through reading, seeking out professional development experiences and by talking to or observing teachers with experience teaching students with autism spectrum disorders in integrated settings. Students with autism spectrum disorders constitute a diverse group so it is important to acquire as much information about the individual student as possible.

Being proactive and anticipating potential problems increases the likelihood of successful inclusion. This involves identifying potential difficulties the student may encounter in the classroom and developing strategies to deal with or avoid such issues. Teachers also need to develop ways to facilitate peer interactions, consider behavioural issues and develop support plans.

Students with autism spectrum disorders have unique patterns of learning. It is not unusual for them to forget previously learned concepts and skills. Similarly, students with autism spectrum disorders may be able to demonstrate a skill in one setting or on one task but not others. What may seem like noncompliance or stubbornness may be a manifestation of neurological and/or learning differences. These patterns are characteristic of autism spectrum disorders. While an uneven pattern of learning is a common feature of autism spectrum disorders, each student is unique. It is important to base expectations on knowledge of the disorder, and on knowledge of an individual student's strengths and needs.

The inclusion of students with autism spectrum disorders is the collective responsibility of teachers, teacher assistants, school administrators, school district consultants and parents. All partners must work together for the experience to be successful.

The following suggestions may help teachers prepare to receive a student with autism spectrum disorders.

- Identify potential resources and sources of support.
- Seek the advice of experienced teachers.
- Set reasonable and achievable goals.
- Use existing or published resources, e.g., social scripts, visual supports. Individualizing programs does not necessarily mean developing all materials from scratch.
- Remember that even well-documented, evidence-based and widely used strategies do not work with all students.
- Clearly define the roles of all staff working with the student.

Preparing Students with Autism Spectrum Disorders

Competent social skills are essential to successful inclusion. However, it is unrealistic to postpone integration until the student has developed all of the prerequisite social skills. It is important to acknowledge that some students who would benefit from inclusion may take several years to develop even basic peer interaction skills.

For more on placement in inclusive classrooms, see pages 111–123.

In the home and preschool environments, teachers and parents can prepare students for inclusion by increasing their awareness of and interest in peers. It is often helpful to specifically point out peers who are engaging in activities that may be of interest to children with autism spectrum disorders. Integration offers a wide variety of behaviours, skills and attitudes to imitate and incorporate into existing skill sets. Consequently, enhancement of the student's imitation skills is an important component of programs for students with autism spectrum disorders.

Promoting Understanding

The most effective way to promote understanding and acceptance in the classroom is to model these positive attitudes. Students tend to perceive students with special needs as valued and equal members of the class when teachers:

- recognize students' achievements in meaningful ways
- call on students to participate in ways that are meaningful to them
- communicate that teasing and bullying are not acceptable and will not be tolerated
- adapt the program to allow all students to participate and learn.

It is human nature to be curious about and cautious of those who are different. Providing students with information can satisfy this curiosity. There are many ways to teach students about autism spectrum disorders. These include: reading books, facilitating class discussions, showing videos and/or inviting guest speakers to talk to the class. Parents can be effective and powerful guest speakers to invite into the classroom. Have students with autism spectrum disorders create an "All About Me" book or give short presentations about their strengths to share with classmates. Decisions about the amount and type of information to present should be made in consultation with students and their parents. The information should be comprehensive enough to address pertinent questions and dispel misconceptions, but limited enough to respect students' privacy.

Respond to questions raised in class in an honest, open manner and address any incorrect assumptions and fears. The following are common questions classmates ask.

- How did the student get autism spectrum disorders?
- Can I catch autism spectrum disorders?
- What can I do to help?
- Will the student get better?
- Why does the student do that (questions about specific behaviours)?

In some cases, parents express concern about having a student with autism spectrum disorders placed in their son or daughter's classroom. It can be helpful to explain how inclusion can be beneficial for typical students. Opportunities to interact with students with exceptional needs can promote understanding and acceptance. Inclusion should not adversely affect the quality of other students' education nor should it significantly reduce the amount of teacher attention each student receives.

There are several books and programs that foster disability awareness and understanding. The activities generally highlight what it is like to live with a disability and conclude that all people have strengths and limitations. Ask students to communicate messages to each other without using words to help them experience what life is like for students with autism spectrum disorders. Or, ask students to complete simple tasks wearing mittens or oven mitts, follow verbal instructions issued in another language or while wearing earplugs to sensitize them to obstacles faced by their classmate with autism spectrum disorders. To promote empathy, ask students to describe the feelings they experienced when visiting foreign lands or in unfamiliar situations.

Adapting Instruction

One way to facilitate acceptance and understanding is to adapt instruction to ensure all students have access to programs of study. Decisions regarding adaptations should consider students' skills and abilities, and the topics being taught. In some cases, it may not be necessary to adapt lessons at all. In other situations, it may be necessary to provide supports such as peer partners, for students to be successful. Alternatively, it may be necessary to adapt the actual lesson or classroom activity. Adaptations can range from relatively minor, e.g., adjusting the size of the task, to major revisions, e.g., altering the content or difficulty level. In some cases, programming may involve individualized functional goals that are addressed within the classroom.

Adapting equipment

In some situations, it may be necessary to adapt classroom materials to increase the likelihood of success. The following is a list of possible equipment adaptations.

- Grip adapters may be required for pencils, spoons and toothbrushes for students who display fine motor difficulties.
- Raised line paper creates a more obvious physical boundary and can help students print between lines.

- Some students display a high level of motor restlessness and have a difficult time inhibiting movement for extended periods of time. In such situations, inflated seat cushions may have a positive impact on their ability to attend. Similarly, some students are more attentive when seated on a therapy ball.
- Zipper extensions and/or shoes with Velcro closures may allow students to dress independently.
- Students who experience great difficulty with fine motor tasks may be more successful using computers to complete written assignments. Some students respond positively to early literacy software.
- Adapted scissors may help students cut paper more effectively and independently.
- Spatial concepts, such as left and right, are often difficult for students with autism spectrum disorders to understand. It may be helpful to mark shoes in an unobtrusive manner to ensure they are placed on the correct foot.
- Some students become distracted by irrelevant information, e.g., page numbers, lines, pictures. It may be necessary to eliminate extraneous details from books and worksheets.
- Some students find glossy surfaces distracting. It may be necessary to adapt books and desktops to give surfaces a matte finish.

Occupational therapists are an excellent resource for ideas on how to adapt equipment to ensure students with autism spectrum disorders experience success.

Adapting the physical environment

Given that many students with autism spectrum disorders display difficulty self-modulating sensory information, it is important to consider which areas within the classroom are most conducive to learning. If students tend to over-react to auditory stimulation, it may be unwise to have them sit near the door. Similarly, students who have a difficult time coping with fluorescent lighting may experience more success when seated by a window. If students are preoccupied with computers or the alphabet, it may be beneficial to position their desks so these items are not visible. Many students with autism spectrum disorders have relatively subtle sensory issues. For instance, if a student is sensitive to certain smells, he or she may have a difficult time attending to structured tasks when sitting near peers wearing perfume or cologne.

In some situations, it can be helpful to define the physical space associated with a particular activity in a concrete manner. For example, students with autism spectrum disorders may be more successful during group activities that are completed on the floor if a specific space is defined for them. Mats or squares can be provided for all students to avoid drawing attention to an individual student. Alternatively, if a student has a difficult time concentrating when peers are present in the immediate environment, it may be helpful to assign the locker or coat hook at the end of a row.

Adapting evaluation methods

Existing evaluation and report card formats may not have the flexibility or capacity to provide relevant information on the progress and learning of a student with autism spectrum disorders. It may be necessary to develop a separate system to measure progress and communicate this information. Prior to introducing a new unit or concept, it is important for teachers to determine how students with autism spectrum disorders will be expected to demonstrate learning. For instance, it may be necessary to:

- test recognition skills (multiple choice tests) versus recall skills (tests that require students to generate correct answers)
- specify the amount of supervision or prompting required for specific tasks
- reduce the length of tests
- give oral tests
- allow students to use tools, such as dictionaries, counting blocks or calculators
- evaluate skills based on observation of performance
- complete baselines and post-teaching skill checklists to assess skill development.

Adapting assignments

Students with autism spectrum disorders often require more time than their classmates to process verbal information and initiate responses. This difficulty is often compounded when fine motor skills are delayed. When new concepts are introduced or relatively difficult tasks are presented, it may be helpful to present students with shorter or condensed versions of the task. For example, if the class assignment involves a worksheet with 10 math questions, present students with autism spectrum disorders with five questions. This type of adaptation stresses the importance of quality, not quantity. As students experience success, the length of tasks should be gradually increased so they complete the same amount of work as their peers.

Adapting input methods

Given that impaired communication skills are a hallmark of the disorder, it is not surprising that an effective way to adapt tasks for students with autism spectrum disorders is to alter the way instructions and lessons are delivered. Reduce the length or complexity of instructions. Simply stating, "Get your math book," may be easier to comprehend than "Now it is time to turn our attention to the world of math; get out your materials." Because some students display attentional difficulties, they often have a difficult time attending to and remembering verbal instructions. It is often helpful to provide students with written instructions to refer to throughout activities. Some students respond better when words are printed in a relatively large font.

Students with autism spectrum disorders tend to be visual learners and in many situations "a picture is worth a thousand words." It is often effective to provide visual supports to augment learning activities or instructions. This may involve bridging written words or instructions with pictures, providing pictures alone, or actually modelling specific tasks or steps. Rather than showing the class a finished class project and verbally explaining the steps involved, it may be more effective to model each step of the process. Or, it may be possible to call upon a peer to model the steps.

Adapting output methods

The verbal skills of students with autism spectrum disorders are often significantly delayed, so it is often necessary to adapt how students are expected to respond to questions and assignments. Consider these adaptations.

Expect students with autism spectrum disorders to:

- print, rather than write, their responses
- give single word responses rather than phrases or sentences
- type their responses rather than printing them
- circle correct responses rather than printing them
- copy their responses rather than working from memory
- point to responses rather than answering questions verbally
- provide picture symbol responses rather than verbal answers
- draw pictures rather than print responses
- develop collages rather than stories or paragraphs.

Modifying content and difficulty levels

It is sometimes necessary to modify the content or difficulty level of learning activities to better suit the interests and learning needs of students with autism spectrum disorders. This type of modification can take many forms. Because these students often have difficulty comprehending abstract concepts, it may be necessary to present concepts in a concrete manner. For instance, the concepts of "public" and "private" are relatively abstract. In order for students to grasp these concepts, it may be necessary to present concrete examples and explanations of each. This could be achieved using words, pictures or real-life experiences.

The Strategies section of the Alberta Learning resource *Teaching Students with Learning Disabilities* (1996), Book 6 of the *Programming for Students with Special Needs* series, includes many strategies that can be adapted for higher-functioning students with autism spectrum disorders.

Concept maps can also be used to make abstract concepts understandable. They allow a group of students to work on the same project at a variety of different levels. Generally, the main concept is outlined in the middle of the map using words or pictures. Lines are then drawn to connect related facts or concepts. Each concept is defined using words, hand-drawn pictures or photographs cut from magazines. Concept maps are often helpful as they result in a concrete visual representation of a pertinent topic or issue. They also allow students with autism spectrum disorders to actively participate in group projects.

Some students with autism spectrum disorders resist tasks that are not meaningful to them. It is often helpful to incorporate students interests into lessons. For instance, if a student displays a strong interest in dinosaurs, ask the student to print out dinosaur names instead of completing the printing exercise the rest of the class is working on. Similarly, providing the student with a dinosaur book during free reading periods may increase the student's level of participation. Although the ultimate goal of programming is to broaden the student interests, incorporating preferred topics into learning activities can promote skill development and increase motivation. Adding a sensory element to activities can also motivate some students. For instance, printing letters in sand or forming them out of play dough can make printing more appealing.

Students with autism spectrum disorders tend to be more motivated when activities have a distinct purpose they understand. Counting blocks for the sake of counting blocks may not seem meaningful, but counting how many students are present in the classroom and taking attendance information to the office may seem more purposeful. Similarly, printing out random words may not be motivating, however printing out their daily schedules or the lunch menu may be more meaningful. Presenting learning activities in a game format can also increase interest in participation. For example, if the topic is "Community Helpers" it might be possible to develop a bingo game for students, e.g., "This person keeps the community safe by putting out fires."

The following chart lists ways to adapt common classroom activities.

Task/Activity Presented to the Class	Adaptation for a Student with Autism Spectrum Disorders
– summarizing a story	– answering questions about the same story
– finding examples of a particular concept	– copying examples written by a partner
– spelling words by printing	– spelling words using letter tiles
– completing addition/subtraction problems	– identifying more versus less
– measuring	– measuring ingredients for baking
– recognizing quantities	– games involving dice
– printing	– copying strokes/completing word mazes
– reading words	– reading words bridged with pictures
– giving a speech in front of class	– videotaping a speech and playing it for class
– completing money worksheets	– counting real money
– writing in a journal	– circling pictures of activities completed that day
– sorting tiles according to shape	– sorting silverware
– placing words in alphabetical order	– learning to use a dictionary or phone book
– following written instructions	– following a picture-based recipe
– writing a paragraph	– creating a collage on a specific topic

Promoting organization

Some students with autism spectrum disorders have a difficult time keeping their materials organized and retrieving them when required. They may also miss out on important verbal instructions. As a result, they experience anxiety because other students are ahead of them. One way to avoid these problems is to help students develop effective organizational strategies. It may be possible to:

- colour code materials and have the colour associated with a particular subject on the student's daily schedule, e.g., math is red, spelling is blue
- place labels or pictures in students' lockers or desks to indicate where materials should be placed

- provide students with tubs or bags to store materials associated with a particular subject
- provide agendas or checklists to ensure students are aware of all assignments and deadlines
- help students ensure that their binders are organized in an effective manner
- provide students with visual checklists to ensure that specific routines are completed, e.g., putting required materials into backpacks at the end of the day.

Some students require assistance to effectively organize their thoughts. They tend to benefit from strategies such as making outlines and concept maps.

One-to-One Instruction

Leaving the classroom for one-to-one tutoring or therapy is one instructional option that teachers and parents may consider. In some cases, such tutoring can occur within the classroom environment, e.g., in a quiet corner. The main consideration in determining whether pull-out time is necessary is, "Can this concept or topic be taught effectively in a group environment?" If the answer is "yes," then providing isolated instruction may not be warranted. Classroom teachers should make decisions regarding pull-out time after carefully considering students' needs, and consulting with parents and other team members.

Some students with autism spectrum disorders learn more efficiently when environmental distractions are minimized and/or when they receive direct one-to-one teaching. Therefore, pull-out time may be necessary when new concepts or relatively difficult concepts are introduced. Also, some students experience significant levels of anxiety when they make errors in front of their peers. In such cases, pull-out time allows students to practise skills without an audience. In some situations, it is difficult to adapt a particular lesson, so it can be more efficient to work outside the classroom.

When pull-out instruction is necessary, it is critical that learning activities within and outside the classroom be coordinated to promote skill development and generalization. Students need to learn to benefit from group learning experiences and attend to classroom teachers. One alternative to pull-out time is to create groupings of students with similar skill sets and provide small group instruction.

Promoting Positive Peer Interactions

A concerted effort must be made to help students with autism spectrum disorders refine their social skills and to provide peers with the skills and knowledge they need to successfully interact with classmates who have autism spectrum disorders. Students need opportunities that promote positive interactions. Adult assistance should be deliberately faded to allow students to interact as naturally as possible. Peers are often discouraged from talking to a student who is working with the teacher assistant, so students with autism spectrum disorders are sometimes isolated if they may spend considerable time working with teacher assistants.

Refining the social skills of students with autism spectrum disorders should be a primary and ongoing educational goal. Different interventions and teaching approaches are required by different students, in different situations. In some cases, it may be necessary to teach critical social skills during pull-out time or by creating a small grouping of students. Social scripts and stories can also be developed to help students negotiate their way through specific social situations. Teaching staff can also provide students with social coaching. This can involve "coaching from the sidelines" while interactions are occurring or by debriefing with students after interactions.

For more information on working with students with special needs in the ECS environment, see the Alberta Learning resource, *Kindergarten: A Guide to Implementation*.

Classmates frequently misinterpret the behaviour or mannerisms of students with autism spectrum disorders. For example, it is common for peers to assume that students with autism spectrum disorders are unfriendly when they do not respond to questions or greetings. Some students assume that echolalia is intended to mock others or that it is a result of "being allowed to do whatever they want to." It is important to help peers develop insight into the possible causes or functions of the behaviours students with autism spectrum disorders often display. Dispelling myths can help peers become more accepting.

It is also helpful to give peers specific instructions about how to interact with students with autism spectrum disorders. Peers are often reticent to interact with students with special needs for fear that they will say or do something wrong. The best way to overcome this fear is to provide students with accurate information and practical suggestions.

- Encourage peers to be gently persistent during interactions. They should repeat questions and comments, and not give up prematurely.
- Encourage classmates to offer cues and assistance rather than giving answers to students with autism spectrum disorders.

- Coach peers to provide adequate time for students with autism spectrum disorders to process information before making additional comments.
- Provide concrete suggestions about ways to respond to specific behaviours and/or situations. For example, peers should be told what to do if a student engages in potentially dangerous behaviour, displays aggression, fails to follow the rules of a game, has a seizure, etc. Dealing with negative behaviours should never be the responsibility of peers.
- Explain how students with autism spectrum disorders communicate, e.g., word approximations, sign language, picture symbols and gestures, to facilitate understanding.
- Encourage peers to incorporate visuals when communicating with students with autism spectrum disorders.
- Encourage peers to make sure students with autism spectrum disorders are attending before asking questions or making comments.
- Tell peers that it is acceptable to say "no" or "stop" when students display inappropriate behaviours.

In some situations, it may be useful to enlist a specific peer or a small group of peers to help students with autism spectrum disorders develop peer-interaction skills. Select mature peers who display high levels of self-confidence and strong social skills. Once peers have been enlisted, they should be provided with specific roles and responsibilities. It is often helpful to assign play buddies so students with autism spectrum disorders can participate in recess activities. It may be possible to assign study buddies for certain classroom activities. Regardless of the roles they are asked to assume, it is important to remember that peer coaches require ongoing support and encouragement.

Consider creating opportunities to facilitate peer interactions in the classroom. When activities are completed in defined physical spaces, peers are in close proximity to one another and less likely to spread out and form subgroups. It can also be beneficial to create situations that allow students with autism spectrum disorders to demonstrate their strengths to classmates. Students often respond positively when they are placed in situations where they are more able or skilled than their partners. Ask students to read to younger students or tutor students in subject areas they have mastered. Facilitate peer interactions by planning cooperative learning activities that require group members to work together. To maximize effectiveness, each member of the group should be assigned a role consistent with his or her skills.

Forming teams and partners can be anxiety provoking for students with autism spectrum disorders, particularly to those students who are aware that they are less able or different from their peers. Use creative ways to pair up students and form teams. For example, it may be possible to form teams or partners on the basis of height, month of birth, colour of eyes, favourite sports team or by lottery. Such methods ensure students have opportunities to partner with a number of different peers.

Chapter 8: Transition Planning

Students with autism spectrum disorders often have difficulty with transitions. It is hard for them to take in all the information presented by a new situation, determine expectations and generate appropriate responses. As a result, even minor transitions are often difficult and result in increased anxiety and inappropriate or resistant behaviours. Transitions should be carefully and thoughtfully planned. This includes transitions between activities and settings throughout the day, from grade to grade, from school to school and beyond school.

All programs and environments involve transition and change. The goal is to help students cope with these changes and adapt to a variety of settings. Anxiety can often be decreased and inappropriate behaviours prevented or reduced if students are prepared for change and transition. The strategies for communication development and suggestions for instructional approaches in Chapter 5 can be used to help students understand and cope with change.

Transition into the School System

School staff and parents should plan well in advance for the child's entry into kindergarten. Various organizations recommend that February of the preceding school year is a good time to begin this process. Often these children have been in preschools, child care programs or child development programs. A range of support services may be in place before kindergarten.

Parents often seek reassurance that supports from preschool years will continue in kindergarten. Teachers may need to explain the differences between previous services and school-based support services. A school-based team meeting that includes school staff, parents and professionals can be arranged to share important information. This ensures that families' goals are communicated to the school, and helps school districts plan resources for the next school year. Parents must give permission for other service providers to share information with school staff.

Parents may wish to visit classrooms and talk to teachers ahead of time. For some children, several visits to the new setting may be appropriate, so that they can begin to become familiar with the new environment. For others, a gradual introduction to school in the fall may ease this challenging transition.

Transitions Between Activities and Settings

Use schedules

To minimize anxiety about change, give students ample warning before transitions. Use schedules to prepare students for changes in activities. It is important to involve students in referring to the schedule. Go through the schedule giving a description of what to expect. This can be done at the beginning of the day, as well as at transition times.

Schedules vary in complexity and length, and should be tailored to the abilities of individual students. They can be written, or have pictures/pictographs or objects depicting certain activities. Implement a method that indicates completion of an activity, such as turning over a picture card or crossing out an activity.

It is often helpful to use consistent language to refer to scheduled activities. For instance, using words such as "first" and "then" on a regular basis facilitates both smooth transitions and language comprehension.

Some students handle schedule disruptions and change much more effectively if they are warned well in advance. It may be helpful to make a calendar that highlights special events, such as field trips and sports days, so they can anticipate the change.

Provide signals

Schedules may not be sufficient to prepare students for change. Some teachers provide students with a consistent symbol or an object that will be used in the next activity to help them understand what is coming next. For example, when preparing to go to the lunchroom, students can be shown their lunch boxes. Using a watch, clock or timer may also help students understand when transitions will occur. Verbal warnings, e.g., "two more minutes" or "one more turn," can help students to realize that an activity change is forthcoming. It is essential that the warning be used on a consistent basis and not be used out of context. For instance, if a student's backpack is used to signal that it is time to go home, the student may display distress when given the backpack prior to an outing.

Use social stories

Social stories, especially when accompanied by photographs or pictures, are effective in preparing some students for change. A social story should provide specific information about what the transition involves, e.g., details about the activity, description of the new environment. Visual cues, used in combination with verbal instructions, can help students understand what is expected.

Provide choices

Whenever possible, give students opportunities to make decisions regarding which activities are to be completed and/or the order in which they will be attempted. In some situations, students do not have any say about whether or not they want to engage in an activity. However, it is often possible to build in choices to allow them some input in how the activity will be completed, e.g., "Where do you want to sit?" "Which pencil do you want to use?".

Transitions Between Grade Levels

When preparing for the annual transition between grades in elementary school, it is necessary to prepare both students and receiving teachers. Preparation should begin in early spring of the preceding year. The same kinds of issues need to be addressed when students are moving to a new class in the school or to a new community.

Prepare classroom staff

Receiving teachers should be provided with information about student strengths and needs. This can be facilitated through team meetings involving teachers, parents and teacher assistants. Receiving teachers may also need general information about autism spectrum disorders and the educational implications. It may be beneficial for the receiving teachers and teacher assistants to visit students in their current classrooms in order to observe:

- how they behave
- the current routine and organizational structure
- successful adaptations and modifications to the environment and curriculum
- visual systems used to support students
- effective instructional strategies
- students' levels of participation in the activities and social life of the class.

Ideally, a planning meeting should be conducted to exchange information as well as to discuss goals for subsequent IPPs, and instructional strategies and approaches that have proven effective.

Potential topics include:

- effective ways to motivate
- students' likes and dislikes
- sensory-related issues, e.g., stimuli students over- or under-react to
- effective behaviour management strategies or crisis intervention plans
- safety-related issues, e.g., running away, eating inedible objects
- pertinent health issues, e.g., how students communicate illness, allergies, description of seizures.

The planning meeting generally provides parents and teachers with an opportunity to discuss goals, instructional strategies, curricular modifications, methods for maintaining appropriate behaviour, and ways to encourage communication and peer interaction. It is preferable to conduct the meeting before the end of the current school year. Preparing a short videotape of students for receiving teachers is a creative way to provide information. Ask parents for permission to tape their children.

Prepare students

Prepare students for new classroom settings by showing them videotapes or photographs of new teachers and classrooms. It may be helpful to prepare scrapbooks that students can refer to over the summer. Whenever possible, visits to future classrooms should be scheduled. To reduce anxiety, a familiar person should accompany students.

Current staff can help make transitions to new classes positive by ensuring familiar objects accompany students to new classrooms. Current teachers and receiving teachers should work together to plan activities and privileges for students in the new setting. As with all future events, students with autism spectrum disorders need to know what to expect. Prepare a calendar that clarifies when visits to the new setting will occur and when students will be moving.

Transitions Between Schools

Suggestions for facilitating transitions between classrooms are also applicable to planning for transitions between schools. However, additional time and preparation may be required as students need to adjust to new buildings as well as new classrooms. If the transition is from elementary to junior high school, students may need to be prepared for:

- multiple teachers
- moving between different classes
- having different classmates for each subject
- using lockers to store belongings
- having homework assigned on a regular basis
- managing multiple notebooks or binders.

If possible, arrange for students to visit new schools on a number of occasions. If students are particularly resistant to change, it may be necessary to introduce new aspects slowly and go through a process of desensitization and rehearsal. For example, the initial visit may involve simply going to the school and entering in the front door. On another visit, the student might visit a classroom.

Provide students with videotapes of new schools and written information to help them prepare for the change. Identify key people students can talk to or go to for help. Enlist the help of peers who will help students make adjustments and accompany them to various locations.

Some students require additional support or adaptations to successfully make the transition into junior high. It may be beneficial to:

- assign adult mentors, e.g., key teachers, to address questions and concerns
- help students select age and socially appropriate wardrobes
- ensure that hygiene related issues have been addressed
- provide students with key locks or single number combination locks
- assign buddies to accompany students to extracurricular activities
- develop homework journals and schedules to ensure assignments are completed
- ensure students have ways to deal with teasing or bullying
- help students develop and maintain organized binder systems or workbook systems
- provide students with school maps to refer to during class changes.

See page 193 for information on regional educational consultation services.

Initiate referrals to regional educational consultation services well before students move to new schools. This ensures service delivery is minimally impacted.

Teach new skills

When the education program involves new settings, such as work placement, students with autism spectrum disorders should be taught the skills they will need in the new setting. These include:

- how to get to the new setting independently
- rules that are different from the current setting
- social skills required
- strategies for getting around
- ways to keep possessions organized
- strategies for dealing with anxiety
- where to go for help, if needed.

Transition from High School to Adult Life

It is recommended that transition planning from high school to adult life begin as early as possible. Initial planning for transition to adult life often begins after the first year of high school.

A collaborative process

Planning transitions is a collaborative process. It is important that parents, school personnel, and representatives from community agencies and support services begin long-term planning for students the first year of high school. Areas to consider include:

- employment options
- post-secondary training and education options
- income support opportunities
- residential options
- transportation needs
- medical needs
- community recreation and leisure options
- maintenance of family/friend relationships
- advocacy and guardianship.

To be effective, the planning process should be a collaborative effort involving students, families, schools, and community agencies and services. Identifying desired post-school outcomes is the driving force behind transition planning, so students and families are central to the planning process. The desired post-school outcomes drive the IPP goals and set the direction for day-to-day activities.

Transition plans should be included in students' IPPs. As with the other parts of the IPP process, transition goals and strategies should be developed at a meeting of the collaborative team. There are a variety of tools or processes for conducting such meetings.

One approach is to conduct a MAPS (McGill Action Planning System)[67] meeting. During the MAPS meeting, participants focus on answering seven key questions.

- What is the story of the person? (history)
- What is the dream for the future?
- What is the nightmare? (situations, outcomes to avoid)
- Who is the person? (process for gathering comprehensive information)
- What are his or her strengths, abilities, gifts and talents?
- What are her or his needs?
- What is the plan of action?

Regardless of the process or format used to conduct the transition planning meeting, the result should be a plan that addresses:

- desired outcomes for adult life
- specific current needs
- how those needs will be met
- the agencies and persons responsible
- timelines.

Subsequent planning should result in goals and objectives that identify what needs to be taught in order to meet the desired adult outcomes.[68]

Contacts/Resources

For students who are not able to support themselves financially, it may be necessary to contact:

Assured Income for the Severely Handicapped (AISH)
Alberta Human Resources and Employment
Calgary: 403–297–8511
Edmonton: 780–482–9642

For students who are unable to care for themselves or make significant life decisions, it may be necessary to contact:

Office of the Public Guardian
Calgary: 403–297–3364
Edmonton: 780–427–0017

For students who are not able to manage their financial affairs, it may be necessary to contact:

Public Trustees Office
Calgary: 403–297–6541
Edmonton: 780–427–2744

Role of teachers

The role of teachers in helping students prepare for transitions out of the school system is to provide opportunities for students to develop skills for work and independent living.

The range of expectations depends on students' abilities and needs. Some students with autism spectrum disorders plan to go on to further education or training following high school. Consequently, there will be a greater emphasis on academic preparation, in addition to work experience and development of job-related skills, and skills for leisure and recreation. For others, the program may focus on work experience, community-based training and self-care. To facilitate transition planning, it is important to be familiar with regional systems and services for adults with developmental disabilities.

In general, school programs can prepare students for transition by:

- providing a variety of work experiences to help individuals determine preferences
- encouraging participation in extracurricular activities and social events
- encouraging volunteer work
- helping with developing résumés
- training in social skills for the job place
- providing on-the-job preparation, once preferences have been established
- training in the use of public transportation
- training in self-management
- teaching functional academics appropriate to the ability levels of students.

Chapter 9: Students with Asperger's Syndrome

Students with Asperger's syndrome often display many of the characteristics associated with autism spectrum disorders. The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (American Psychiatric Association, 1994) criteria stipulate that students must display a qualitative impairment in social interaction, and restricted, repetitive and stereotyped patterns of behaviour in order to be diagnosed with Asperger's syndrome. In addition, the student must possess at least average cognitive abilities and adaptive functioning skills.

The main differences between people with autism spectrum disorders and those with Asperger's syndrome is that individuals with Asperger's syndrome do not have clinically significant delays in early language development or significant delays in cognitive development. They usually do not have the same degree of difficulty in the development of age-appropriate self-help skills, adaptive behaviour and curiosity about the environment in childhood. However, even though students with Asperger's syndrome may obtain scores in the average or above average range, they continue to demonstrate subtle but important differences in cognitive and social processing.

Individuals with Asperger's syndrome constitute a diverse group, so treatment and educational approaches must be individualized. It is important to know that individuals with Asperger's syndrome are at risk for developing other psychiatric conditions. Historically approximately 30–35 percent of students with Asperger's syndrome develop secondary psychiatric conditions, such as depression, anxiety disorders or obsessive-compulsive disorders. Pushing students too hard to "be normal" can exacerbate existing anxieties and social difficulties.

Learning and Behavioural Characteristics

Asperger's syndrome is characterized by a qualitative impairment in social interaction. People with Asperger's syndrome may be keen to relate to others but do not have the necessary skills and may approach others in peculiar ways.[69] They frequently lack understanding of social customs and may appear socially awkward, have difficulty with empathy and misinterpret social cues. They often have the same difficulties as individuals with autism spectrum disorders in understanding that other people have their own perceptions, thoughts and feelings. People with Asperger's syndrome do not acquire social skills efficiently through incidental learning and frequently need explicit instruction in the area of socialization.

Although children with Asperger's syndrome usually speak fluently by the time they enter kindergarten, they often have problems with the complexities of language, including:

- pragmatics—the use of language in social contexts
- semantics—multiple meanings
- prosody—the pitch, stress and rhythm of speech.[70]

One common characteristic of people with Asperger's syndrome is that they have difficulty carrying on social conversations. They may have an advanced vocabulary and talk incessantly about a favourite subject, however the topic may be somewhat narrowly defined and they may have difficulty switching to other topics.

People with Asperger's syndrome may have problems communicating with others because they do not naturally learn the rules of conversation. They may:

- interrupt or talk over the speech of others
- make irrelevant comments
- have difficulty initiating and terminating conversations
- use speech characterized by a lack of variation in pitch, stress and rhythm
- use overly pedantic or formal speech, particularly as they reach adolescence
- stand too close when talking to someone
- stare, use abnormal body posture or other strange body language
- fail to understand gestures and facial expressions of others.

Students with Asperger's syndrome are of average to above-average intelligence and may appear quite capable. Many students with Asperger's syndrome are relatively proficient in their knowledge of facts and may have extensive factual information about a subject that absorbs them. However, they demonstrate relative weaknesses in comprehension and abstract thought, as well as in social cognition. Consequently, they experience academic problems, particularly with:

- reading comprehension
- problem solving
- organizational skills
- concept development
- making inferences and judgements.

In addition, they often have difficulty with cognitive flexibility—their thinking tends to be rigid. Students with Asperger's syndrome often have considerable difficulty adapting to change or accepting failure. They do not readily learn from their mistakes.[71]

An estimated 50–90 percent of people with Asperger's syndrome have problems with motor coordination.[72] The affected areas include locomotion, balance, manual dexterity, handwriting, rapid movements, rhythm and imitation of movements.

Students with Asperger's syndrome may be hypersensitive or hyposensitive to specific stimuli and may engage in unusual or repetitive behaviours to obtain a specific sensory stimulation.

Many students diagnosed with Asperger's syndrome are inattentive, easily distracted and have received a diagnosis of Attention-Deficit/Hyperactivity Disorder at one point in their lives.[73] Anxiety is also a characteristic associated with this syndrome. They may experience some difficulty understanding and adapting to the social demands of school. Appropriate instruction and support can help alleviate stress.

Strategies

Some strategies for teaching students with autism spectrum disorders may be applicable to students with Asperger's syndrome, however it is important to consider the unique learning characteristics of individual students, provide support when needed and build on students' strengths. The following chart identifies specific learning difficulties and offers a number of possible classroom strategies.[74]

Learning Difficulty	Classroom Strategies
Difficulties with language	
• has tendency to make irrelevant comments	• use *Comic Strip Conversations* (Gray, 1994) to teach conversation skills related to specific problems • teach appropriate opening comments • teach conversational skills in small group settings
• has tendency to interrupt • has tendency to talk on one topic and talk over the speech of others	• teach rules and cues regarding turn-taking in conversation and when to reply, interrupt or change the topic • use audiotaped and videotaped conversations
• has difficulty understanding complex language, following directions and understanding intent of words with multiple meanings	• teach student to seek assistance when confused • explain metaphors and words with double meanings • encourage student to ask for an instruction to be repeated, simplified or written down when necessary • pause between instructions and check for understanding • limit oral questions to a number student can manage • watch videos to identify nonverbal expressions and their meanings
Insistence on sameness	• prepare student for potential change wherever possible • use pictures, schedules and social stories to indicate impending changes
Impairment in social interaction • has difficulty understanding the rules of social interaction • is naive • interprets literally what is said • has difficulty reading the emotions of others • lacks tact • has difficulty understanding unwritten rules and once learned, may apply them rigidly	• provide clear expectations and rules for behaviour • explicitly teach the rules of social conduct • teach student how to interact through social stories, modelling and role-playing • educate peers about how to respond to the student in social interactions • use other children as cues to indicate what to do • encourage cooperative games • provide supervision and support for the student at breaks and recess, as required • use a buddy system to assist the student during nonstructured times • teach the student how to start, maintain and end play • teach flexibility, cooperation and sharing • teach the student how to monitor his or her own behaviour • structure social skills groups to provide opportunities for direct instruction on specific skills and to practise actual events • teach relaxation techniques and designate a quiet place for relaxing
• has problems with social distance • lacks awareness of personal space	• model and practise appropriate personal space
Restricted range of interests	• limit perseverative discussions and questions • set firm expectations for the classroom but provide opportunities for student to pursue own interests • incorporate and expand on personal interests in activities

Learning Difficulty	Classroom Strategies
Poor concentration • is often off task • is distractible • is disorganized • has difficulty sustaining attention	• provide frequent teacher feedback and redirection • break down assignments • use visual organizers, semantic mapping and outlining • provide timed work sessions • reduce homework assignments • seat student at the front of the classroom • use nonverbal cues to get attention
Poor organizational skills	• use personal schedules and calendars • maintain lists of assignments • help student use to-do lists and checklists • place pictures on containers and lockers • use picture cues in lockers
Poor motor coordination	• involve student in fitness activities • take slower writing speed into account when giving assignments • provide extra time for tests • consider the use of computers for written assignments
Academic difficulties • has difficulty with comprehension • has difficulty with problem solving • has difficulty with abstract concepts	• do not assume that student has understood simply because he or she can re-state the information • provide direct instruction as well as modelling • show examples of what is required • do not assume student has understood what is read—check for comprehension, supplement instruction and use visual supports • break tasks down into smaller steps or present in another way • be as concrete as possible in presenting new concepts and abstract material • use activity-based learning where possible • use graphic organizers, such as semantic maps, webs • use outlines to help student take notes, organize and categorize information • avoid verbal overload • capitalize on strengths, e.g., memory
Emotional vulnerability • has difficulty coping with the social and emotional demands of school • is easily stressed because of inflexibility • is prone to anxiety • has low self-esteem • has difficulty tolerating mistakes • is prone to depression • has rage reactions and temper outbursts	• provide positive praise • teach student to ask for help • teach techniques for coping with difficult situations and dealing with stress • use rehearsal strategies • provide experiences in which student can make choices • help student to understand own behaviours and reactions of others • educate other students • use peer supports, such as buddy systems and peer support networks

Learning Difficulty	Classroom Strategies
Sensory sensitivities • is sensitive to sound, touch, taste, light intensity, colours or aromas • reacts to: – sudden unexpected noises, such as a telephone ringing or fire alarm – high-pitched continuous noises – confusing, complex or multiple sounds, such as shopping centre noise	• be aware that normal levels of auditory and visual input can be perceived by student as too much or too little • keep the level of stimulation within student's ability to cope • avoid sounds that are distressing, when possible • use music to camouflage certain sounds • minimize background noise • use ear plugs if noise or reaction is extreme • teach and model relaxation strategies and use of diversions to reduce anxiety • provide opportunities and space for quiet time • arrange for independent work space free of sensory stimuli that bother student

Chapter 10: Case Studies

The following case studies were developed to show three very different students with autism spectrum disorders. The features of the students were derived from several real students. While the information was significantly altered to preserve confidentiality, the case studies show the real needs of students with autism spectrum disorders and how teachers can plan to meet those needs.

These case studies are provided to show the types of goals, objectives and teaching strategies that are often implemented with students with autism spectrum disorders. It is important to remember that every education program should be individualized to meet students' identified needs.

Karen: A Kindergarten Student

Karen has just entered kindergarten. She received a diagnosis of autism spectrum disorders and intellectual disability when she was four years old.

John Akins, Karen's kindergarten teacher, and Jane Wilson, the teacher assistant, observed Karen in her child care placement last June and met with the supported child care consultant who was familiar with Karen's program in the preschool setting.

Karen has been slow in development. She stood at 20 months and walked at 23 months. She developed a pattern of repetitive rocking which continued until she was four years old. At that age, she developed a behaviour pattern of tantrums that included screaming, kicking and throwing herself on the floor. Karen becomes agitated at school and at home when the environment becomes busy or noisy. Interestingly, the noises of bouncing balls and running feet in the gym do not bother her. She has tantrums when she is over-stimulated or when she does not get what she wants, but is easily redirected or calmed in a quieter area of the classroom. Stroking her head gently usually calms her. She appears to have a diminished response to pain. For example, when she fell and bruised her knee, she did not react.

Karen enjoys manipulating sensory play objects, such as water and beads, but she does not play functionally with toys in the class or at home unless directed by adults. She spontaneously talks on a toy telephone.

Karen's attention span varies, but is especially short for activities with a social component, such as circle time or group stories. She is currently communicating through echolalia, gestures and limited functional speech, e.g., "No," "I need help," and "Get the other one." She makes transitions calmly when given advance notice of the change. Karen's parents are particularly interested in the development of her expressive and receptive communication skills.

Karen requires verbal prompts to use the toilet, assistance pulling up her pants and prompts to wash her hands after toileting. She has never had a toilet accident at school, although occasional accidents persist at home. Karen sometimes runs off, so parents and school staff need to be vigilant about closing doors and ensure that Karen is supervised closely on the playground.

John Akins, Jane Wilson and Karen's parents collaborated on an assessment of Karen's likes and dislikes.

LIKES	DISLIKES
• playing with yarn or string (repetitive and self-stimulating play) • playing with beads (stirring with fingers, making a long row; not stringing or making concrete objects with beads) • anything that hangs (Venetian blinds, plants that grow downward, strands of glue) • blocks (making tall towers, lining blocks in a row) • water (turning on the water fountain, filling containers, splashing in bathroom sink and water tray) • known routines (snack time, home time), having her head stroked (head-stroking calms tantrum behaviour and she is then able to follow verbal directions) • being near teacher or parent and exploring materials the adult is using or demonstrating (touching felt shapes during colour lesson, touching dough during cookie making) • playing with objects or materials to see how they work, not what their conventional use is (turning the glue in the glue stick to make it go up and down, rather than using it to glue)	• participating in unfamiliar activities (refused to enter gym the first PE period) • expectations of participating in any activity without verbal preparation (prefers "in five minutes we will be…") • loud, unexpected noises (metal scraping, sound of playground swings; announcements on the PA system are tolerated when at a predictable time) • getting hands dirty (clay, paint or food) • sitting near other children (at circle time) • being touched by other children • sharing the water tray with other children (may have a tantrum if another child tries to play at the water station when she is there)

Format A **Individualized Program Plan** **Student Name:** Karen

Student Information

Date: October 15, 200X

Student I.D.# 10598765

Sex: ☐ M ☒ F

Name: Karen

Birth date: December (month) 15 (Day) 199X (Year)

Address:

Telephone No.:

Parent/Guardian: Betty and Hugh

School: Hypothetical Elementary School

Grade/Learning Group: K

Relevant Medical Information

ABC Hospital Report (May 200X): Diagnosis of autism spectrum disorders with intellectual disability

- Language mostly echolalia, understands simple verbal communication
- No interest in peers, will approach adults for affection
- Rage behaviours if patterns are broken, inappropriate focus on objects, sometimes destructive

IPP Team Members	Position
Beth Masters	School Administrator
Betty and Hugh	Parents
John Akins	Classroom Teacher
Jane Wilson	Teacher Assistant
Stan Uster	Speech-language Pathologist

Additional Information

Format A **Individualized Program Plan (cont'd)** **Student Name:** Karen

Special Education and Related Services (additional school staff/support personnel/agencies)

IPP Coordinator – John Akins
Teacher Assistant – Jane Wilson
Speech-language Pathologist – Stan Uster

Parental Involvement and Expectations:
- involved in development of IPP
- parents will work on expressive and receptive language skills at home

Areas of Strength

- imitative language
- strong motor and fine motor coordination
- strong attention span for activities she is interested in
- interest in how things work
- imitates drawing shapes

Areas of Need

- to further develop receptive language
- to develop functional expressive language
- to learn to anticipate routines and changes
- to decrease tantrums, learn calming strategies
- to increase independence in self-care routines, i.e., toileting
- to increase interaction with peers

Required Classroom Accommodations (changes to instructional and evaluative strategies, materials and resources, facilities or equipment)

- have a designated quiet/relaxation area in the classroom
- use a daily communication book between home and school
- use visual supports, e.g., concrete objects, photographs, drawings, picture communication symbols, to provide support for Karen in processing oral information
- provide an early verbal alert paired with a visual cue to assist Karen with anticipating and preparing for transitions between activities in the classroom
- instructional routines, e.g., picture sequence or visual script of routine, will be used and posted
- provide peers with specific instruction about how to communicate and interact with Karen

Format A Individualized Program Plan (cont'd) **Student Name:** Karen

Assessed Level of Educational Performance, e.g., teacher observation, interview, informal and formal testing

Date Given	Tests	Results
May 199X	– Vineland Adaptive Behaviour Scales	– Age-equivalent scores between 9 months (communication) and 36 months (motor skills)
	– Childhood Autism Rating Scale	– Scores fall in the severe range
	– Checklist from the Carolina Curriculum for Preschoolers with Special Needs	– Approximate age equivalencies • communication – 12 months • social adaptation – 12 months • cognition – 18 months • gross motor – 40 months • fine motor – 32 months

Summary of Assessed Level of Educational Performance

Language: delay in both receptive and expressive language development
- can follow simple oral directions
- can imitate with echolalia, some imitations are situation appropriate

Mathematics:
- makes patterns by lining or stacking objects

Can use crayons, scissors, paintbrushes and pour water.
Can put on shoes and jacket with assistance; uses toilet with assistance

Format A **Individualized Program Plan (cont'd)**

Student Name: Karen

Long-term Goal: Karen will increase her receptive language skills.

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
1. By November, using pictures paired with verbal cues, Karen will identify the current classroom activity from three alternatives on 90 percent of occasions.	November 15	– teacher/TA observation	– achieved
2. By December, when shown a familiar instructional routine (3–4 picture sequence) paired with simple verbal directions, Karen will complete the routine without physical prompts on 90 percent of occasions.	December 15	– teacher/TA observation – parent observation (home)	– achieved; Karen independently follows a morning arrival routine, i.e., takes off coat, hangs up coat and backpack, puts on indoor shoes, and goes to sit in designated spot for morning circle. At home, Karen follows a toileting routine which is posted in the bathroom although she still requires verbal prompts to use the toilet.
3. By February, when asked to select an object, Karen will choose the correct verbally named object with 100 percent accuracy on 15 different trials.	February 15	– teacher/TA observation – data collection checklist – parent observation (home)	– achieved; Karen did well mastering this objective and particularly enjoyed learning new words in a "Find a ____" game format.

Format A **Individualized Program Plan (cont'd)** **Student Name:** Karen

Long-term Goal: Karen will increase her functional use of oral language.

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
1. By October, when shown a concrete object, i.e., a noun, paired with its verbal name, Karen will say the name of the object on eight out of 10 exposures for four consecutive days.	October 15	– teacher/TA observation – data collection checklist – parent observation (home)	– achieved
2. By November, when an action, i.e., a verb, is modelled, Karen will imitate and name the action on eight out of 10 exposures for four consecutive days.	November 15	– teacher/TA observation – data collection checklist – parent observation (home)	– achieved
3. By January, Karen will match and verbally label pictures of 15 familiar objects or actions in her photograph communication book on four out of five days.	January 15	– teacher/TA observation – parent observation (home)	– achieved; Karen is able to recognize and name 30 objects or actions.
4. By March, Karen will request an object by pointing to its photograph in her communication book and verbalizing its name on 90 percent of opportunities over four consecutive days.	March 15	– teacher/TA observation – parent observation (home)	– achieved; Karen is using her communication book to express wants.
5. By May, when presented with three photographs of centre-time activities, Karen will point to and name her activity of choice on three out of four opportunities.	May 15	– teacher/TA observation	– emerging; opportunities for making choices should continue next year.
6. By June, when playing at a centre activity, Karen will use her photograph communication book to initiate and support oral conversation with a peer on two out of four opportunities.	June 15	– teacher/TA observation	– Karen is able to imitate a simple play script, however she does not yet independently initiate any interaction with peers. The IPP team has decided that this objective must be broken down and rewritten.

Format A **Individualized Program Plan (cont'd)**

Student Name: Karen

Long-term Goal: Karen will increase the amount of time she spends in classroom group activities, e.g., circle time, music, stories. (Established January 15, 200X)

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
1. By February, when shown a picture from her daily schedule of an upcoming class activity, Karen will join her classmates at the beginning of each lesson and remain in the group activity for the first five minutes of each lesson.	February 15	– teacher/TA observation	– achieved
2. By May, when shown a picture from her daily schedule of the upcoming class activity, Karen will join and remain in group lessons until she is signaled to leave.	May 15	– teacher/TA observation	– achieved; Karen is able to remain in group activity for up to 15 minutes.

Format A Individualized Program Plan (cont'd)

Student Name: Karen

Long-term Goal: Karen will decrease tantrums and independently use a self-calming strategy.

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
1. By November, when working with her daily picture schedule, Karen will acknowledge the completion of an activity by turning over the picture card of the completed activity without screaming or tantrums on 75 percent of occasions.	November 15	– teacher/TA observation	– emerging; continue training with picture sequences to support transitions between activities.
2. By December, when modelled by the TA and supported by a visual instructional routine, i.e., picture sequence of self-calming behaviours, Karen will imitate the self-calming sequence on 90 percent of occasions.	December 15	– teacher/TA observation	– achieved
3. By March, when prompted verbally and supported by a visual instructional routine, Karen will initiate self-calming behaviours on 90 percent of occasions.	March 15	– teacher/TA observation	– achieved
4. By June, Karen will independently initiate self-calming behaviours when she is anxious or upset on 90 percent of occasions.	June 01	– teacher/TA observation	– achieved

Format A **Individualized Program Plan (cont'd)**

Student Name: Karen

Transition Plans (recommendations, services required, strategies and materials that were effective)

Karen will visit the Grade 1 class once a week from March to the end of the year.

Karen will practise using her photograph communication book on each visit to interact with the Grade 1 teacher.

Karen's family will facilitate two visits to the school in August before the first week of school.

In Grade 1, Karen will participate in a lunchroom helper role by doing routine tasks, such as setting out the condiments and arranging the chairs with support staff.

Signature of IPP Team Members (Signature indicates that you understand the IPP)

Parent/guardian ______________________

Student (if applicable) ______________________

Principal or designate ______________________

Teacher(s) ______________________

____

____

Other team members ______________________

____

____

____

____

Format A Individualized Program Plan (cont'd)

Student Name: Karen

Annual Review and Recommendations

Goals Achieved

Karen made excellent progress in receptive language development. When given a few seconds to process instructions, she follows most oral directions without physical prompting. She now has a working expressive vocabulary of several nouns and verbs representing objects and actions in the classroom and says the names of five classmates.

Karen has developed a well-established self-comforting behaviour using her teddy bear "Arthur." She uses it independently to calm herself, decreasing tantrums to about one a week. She takes Arthur to circle time and other group activities, and stays in group activities for up to 15 minutes. She will tolerate one other child in the water play area, but leaves if more children join. She seems better able to cope with proximity to classmates in general.

Strategies That Worked Well

Karen needs a clear understanding of instructions and expectations within activities. At this point in time, instructions should be communicated through simple, concise expressions and paired with drawings or pictures.

The pictorial scheduling system of daily activities was effective in helping Karen understand the sequence of activities in her day.

Creating pictorial instructional routines (visual scripts) for difficult tasks was very effective in developing Karen's independent self-care skills, i.e., classroom arrival routine and toileting.

The home-school photograph communication book is an effective system for enhancing Karen's expressive and receptive communication. Karen eagerly uses her photograph book to communicate wants and needs, but is not yet using it for peer interactions.

Goals Requiring Ongoing Focus

- Developing expressive and receptive language skills and generalizing language use across a variety of settings.
- Developing Karen's understanding of sequencing and time concepts, i.e., first, next, last, today, tomorrow, yesterday.
- Loud noises are still an issue, as it is hard to predict their occurrence both at home and at school.

Support Services Required

- Teacher aide support will need to continue at the present level.
- Training for Karen's parents in how to implement, monitor and modify Karen's support plan would be of benefit to help them implement instructional routines in both home and community environments.

Recommendations

- Continue to provide direct instruction for using the photograph communication book to expand Karen's expressive/receptive communication.
- Coordinate home-school support for receptive/expressive vocabulary development to encourage generalization of language across settings.
- Continue to use a pictorial scheduling system to assist Karen in planning and organizing her day. Understanding the sequence of activities in her day adds predictability to Karen's routines, supports her transition from one activity to another and helps her understand changes in routines or activities. Begin to incorporate choice making opportunities into Karen's schedule.
- Develop a more age-appropriate self-comforting routine for Karen, if possible.
- Start work on practical numeracy tasks.
- Continue to focus on developing interactions with peers.

Alan: A Grade 6 Student

Alan is currently integrated full-time into a regular Grade 6 classroom. He was late achieving some of the developmental milestones of early childhood. He started to walk at 18 months and was slow to talk. His early language was almost exclusively repetitive echolalic speech with limited communicative message. As a young child, Alan's play was repetitive with seeming unawareness of others. He did not like to be touched by or be close to other children, was agitated when separated from his mother. He often used his sense of smell to investigate objects and had an unusual interest in small objects, such as keys or switches.

When Alan was three years old, his mother consulted a clinical psychologist. The family saw the psychologist regularly, and his mother participated in parent training in behaviour management. Alan was evaluated by a speech-language pathologist at age three and has had ongoing speech therapy.

At age 11, Alan still has behaviours that require significant support. He functions in the classroom with modified assignments and an individualized visual schedule. The classroom routines include a token economy with reinforcers to maintain appropriate behaviour. Alan is highly inflexible about the schedule and becomes aggressive about unexpected transitions. Problematic behaviours have escalated since the beginning of Grade 6. The behaviours of concern to the teacher, teacher assistant and Alan's mother include banging on the desk or table, head-banging, agitated response if others fail to use specific cues, ignoring adult direction, yelling and throwing objects. These behaviours pose a threat of physical harm to himself and disrupt the orderly functioning of the classroom. Alan has had interrupted sleep patterns and is showing the same behaviours of concern at home. His mother is having difficulty managing him.

Alan's academic skills are below grade level. His reading decoding is estimated at the Grade 3 level and his math computations skills at the Grade 4 level. Math problem solving and reading comprehension are at the Grade 2 level. Most academic tasks can be modified for Alan. It is difficult to evaluate his knowledge using standardized tests or criterion reference measures because he sometimes refuses to do unfamiliar tasks.

Alan likes to make detailed drawings, but tends to focus on the same subjects, usually cars and trucks. He enjoys music, especially listening to quiet music on his Walkman, but will not participate in music activities that require interacting with other students. He has difficulty in gym period and follows a modified physical education curriculum with simple games assisted by the teacher assistant.

Format A Individualized Program Plan

Student Name: Alan

Student Information

Date: October 8, 200X

Student I.D.# 105456789

Sex: ☒ M ☐ F

Name: Alan

Birth date: July (month) 02 (Day) 199X (Year)

Address: ______

Telephone No.: ______

Parent/Guardian: Sarah

School: Hypothetical Elementary School

Grade/Learning Group: 6

Relevant Medical Information

ABC Hospital Report (May 199X): Diagnosis of autism spectrum disorders with abnormal language development and social interaction, unusual interests, and self-stimulatory behaviours

- Atypical development with multiple delays in all areas
- Emerging oppositional behaviour

IPP Team Members	Position
Will Mathews	School Administrator
Sarah	Parent
Chris Lepine	Resource Teacher
Ted Lewis	Classroom Teacher
James Frank	Teacher Assistant
Susan Rice	Speech-language Pathologist
Jerry Richards	Social Worker

Additional Information

Format A Individualized Program Plan (cont'd)

Student Name: Alan

Special Education and Related Services (additional school staff/support personnel/agencies)

Resource Teacher – Chris Lepine
Teacher Assistant – James Frank
Speech-language Pathologist – Susan Rice
Social Worker – Jerry Richards

An Emergency Behaviour Strategy Plan has been developed for all staff.

Parental Involvement and Expectations:
- involved in development of IPP
- parent will reinforce communication and behaviour objectives at home

Areas of Strength

- follows instructions with visual prompts
- uses word processing programs for writing
- uses a timer to monitor on-task behaviour
- uses visual schedule to prepare for changes

Areas of Need

- to develop increased independence at school
- to learn to cope with transitions
- to learn to calm himself when anxious
- to show responsibility for materials and clothes

Required Classroom Accommodations (changes to instructional and evaluative strategies, materials and resources, facilities or equipment)

- provide instruction in a variety of ways, e.g., hands on, visual, multisensory
- use a daily communication book between home and school
- use visual cues and visually scripted instructional routines (drawings, picture symbols) to support Alan's learning
- provide instructional opportunities for Alan to make choices in the classroom
- provide a verbal cue paired with a visual cue prior to transitions between activities

Format A Individualized Program Plan (cont'd)

Student Name: Alan

Assessed Level of Educational Performance, e.g., teacher observation, interview, informal and formal testing

Date Given	Tests	Results
June 199X	– Leiter International Performance Scale (LIPS) – Stanford Binet Intelligence Scale: Fourth Edition (SBFE)	– Nonverbal reasoning skills appear to be at the borderline level (approximately two years below age level) – Assessment with the SBFE was attempted and discontinued. Psychologist felt that Alan's verbal reasoning skills were much weaker than his nonverbal skills.
April 199X	– Peabody Individual Achievement Test – Alberta Diagnostic Reading Test	– Alan's performance was very inconsistent. His decoding skills were much stronger (end Grade 3) than his comprehension skills (start Grade 2). Alan relies primarily on a sight word approach although he does seem to be developing some phonological awareness. Alan can answer comprehension questions involving literal recall.

Summary of Assessed Level of Educational Performance

Language Arts: reading decoding at Grade 3 level, comprehension at Grade 2 (estimated)

Alan can follow simple written instructions that are accompanied by familiar language patterns or examples.
Alan is able to use the computer for word processing simple stories.

Mathematics: computation at Grade 4, problem solving at Grade 2
Alan has mastered addition, subtraction and multiplication at Grade 4 level.
Alan requires visual prompts to attempt word problems. He refuses to attempt geometry problems.

Format A **Individualized Program Plan (cont'd)** **Student Name:** Alan

Long-term Goal: Alan will use oral and visual communication strategies to achieve his desires and function more independently in the classroom and at home.

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
1. By November, with a physical prompt, Alan will use a detailed picture schedule to follow the class routine in four out of four class periods for four consecutive days.	November 30	– teacher/TA observation – parent observation (home)	– achieved – At home, Alan uses his picture schedule (scripted with PECS symbols for dinner routines) with verbal prompts.
2. By February, with a verbal prompt, Alan will use a detailed picture schedule to follow the class routine in four out of four class periods for four consecutive days.	February 28	– teacher/TA observation	– With a verbal prompt, Alan will independently get his work, follow the instructional routine for the assignment and return his work to the "finished basket" about half the time. He still requires a physical prompt the rest of the time.
3. By April, Alan will use his choosing book paired with oral language to support 85 percent of his communication attempts in the classroom.	April 30	– teacher/TA observation	– emerging: Alan will use his choosing book to express his wants.
4. By June, when using his choosing book for communication support, Alan will:	June 01	– teacher/TA observation	
a) select and verbalize five appropriate social script sentences to interact with a peer during partner or small group work on three out of five occasions			– requires prompting
b) orient and attend to a peer's attempt to reply using the choosing book.			– attends to a peer's attempt but does not respond back or initiate further exchange

Format A **Individualized Program Plan (cont'd)**

Student Name: Alan

Long-term Goal: Alan will further develop his functional academic skills in reading and math.

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
1. By November, when using the classroom computer and his personal dictionary, Alan will write and illustrate sentences using five new words per week.	November 30	– teacher observation of written product – checklist of sight words in personal dictionary	– achieved
2. By January, when silently reading a series of short instructional level passages, Alan will be able to recall (in written form using the class computer) two details in two of three passages.	January 30	– teacher will select passages from computer software reading program – teacher aide will measure criteria	– achieved
3. By March, when given math word problems, Alan will select the correct strategy card for solving one-step problems on eight out of 10 attempts.	March 30	– teacher provides problem sheets; teacher aide will monitor strategy selection	– achieved; create strategy cards for two-step problems
4. By May, when silently reading a series of short instructional level passages, Alan will be able to sequence pictures of the story events in three of four passages.	May 30	– teacher selects passages and sequence cards; teacher aide will measure criteria	– achieved

Format A Individualized Program Plan (cont'd)

Student Name: Alan

Long-term Goal: Alan will develop increasing control of compliant and positive behaviours in order to achieve his desires.

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
1. By October, when a self-calming strategy is modelled, Alan will imitate the demonstrated routine on 70 percent of opportunities.	October 30	– teacher aide modelling and monitoring token reinforcers	– achieved
2. By November, when working independently in the classroom, Alan will use a visual cue card to signal his request for adult attention or his desire to be left alone on 50 percent of opportunities.	November 30	– teacher/TA observation	– achieved; increased to 75 percent use by June
3. By January, when prompted verbally paired with a visual cue, Alan will initiate a self-calming strategy 50 percent of the time.	January 30	– teacher/TA observation	– achieved
4. By March, when working on assignments, Alan will use a visual cue card to signal when he needs a break on 60 percent of opportunities.	March 30	– teacher/TA observation	– emerging; Alan uses his break card 40 percent of the time. When frustrated, Alan refuses to do a task rather than ask for help or a break. Continue to model and reinforce use of the break card prior to seeing signs of agitation.
5. By June, when anxious or frustrated, Alan will use his calming strategy 75 percent of the time without prompting.	June 01	– teacher/TA observation	– Alan requires verbal prompts.

Format A Individualized Program Plan (cont'd) **Student Name:** Alan

Transition Plans (recommendations, services required, strategies and materials that were effective)

Alan will continue to need a computer next year in junior high, so arrangements for portable technology should be explored by June 1, 200X.

The resource teacher has already visited with Alan and observed him in classroom and playground settings. A volunteer peer helper from Grade 7 will visit Alan in June and accompany Alan and his mother on least two visits to the junior high school.

Arrangements will be made for the buddy to participate in some activities with Alan next year as part of the peer helper program.

During Grade 7, Alan's IPP team and parent will help Alan explore areas of strength for future vocational and community participation.

Signature of IPP Team Members (Signature indicates that you understand the IPP)

Parent/guardian ____________________ Other team members ____________________
Student (if applicable) ____________________ ____________________
Principal or designate ____________________ ____________________
Teacher(s) ____________________ ____________________
____________________ ____________________
____

Format A Individualized Program Plan (cont'd)

Student Name: Alan

Annual Review and Recommendations

Goals Achieved

- Alan has demonstrated gains in his understanding and use of oral and visual communication strategies over the year. Alan will use his picture schedule with a verbal prompt about half of the time. The rest of the time, he still requires physical prompts.
- Alan is developing independent skills (supported by visual scripts) to work in the classroom and is less reliant on the teaching assistant.
- Alan has mastered using his red/green symbol to indicate desire for attention and desire to be left alone.
- Alan is beginning to use his portable schedule to support himself in transitioning between activities throughout the school, e.g., at recess, lunch, gym.

Strategies That Worked Well

- Instructional routines (scripted with PECS symbols) facilitated Alan's independence in the classroom.
- Colour coding assignment folders and providing colour coded "finished baskets" for finished work were effective in helping Alan find, organize and return his work.
- Visual cues supported Alan's communication and positive behaviours while participating in activities.
- Alan willingly used the computer reading programs.
- The choosing book is an effective system for enhancing Alan's receptive and expressive communication.

Goals Requiring Ongoing Focus

- Alan uses his choosing book enthusiastically, however he occasionally fails to comprehend that he must follow through with his choices. This needs re-teaching and reinforcement to firm up skill and understanding.
- When anxious, Alan still uses disruptive behaviours about 50 percent of the time (yelling, banging). Alan's parent will continue to reinforce Alan's use of self-calming strategies and visual communication strategies over the summer. Prior to September, a meeting will be arranged to discuss effective reinforcers for calming time.
- Continued focus on developing functional reading and writing skills.

Support Services Required

- Teacher aide support to continue at the present level.
- Emergency Behaviour Strategy Plan was used about twice a week in October, about once every two weeks in March and only once in May. In June, many changes in schedules and generally looser planning in the school increased Alan's anxiety level.

Recommendations

- Set up a classroom quiet area and provide strong reinforcement when Alan appropriately asks to use the quiet area.
- Maintain close communication and coordination of strategies between home and school for consistency.

Suggested focus for the Grade 7 year: help Alan develop coping skills for new challenges in the junior high school environment, e.g., changing classes, use of lockers, multiple teachers, and increase functional reading and writing skills.

Rajinder: A Grade 11 Student

Rajinder is a 16-year-old student diagnosed with autism spectrum disorders after many years of being mislabelled "emotionally disturbed with acting-out behaviour." He has developed oral language, but his rapid speech without inflection is difficult to understand. He tends to use oral language without ensuring that anyone is listening.

Raj takes some regular Grade 11 courses, and is supported by a teacher assistant who works with his classroom teachers. For part of each day, Raj works in the resource room on assignments. He is achieving a B level in the regular curriculum in math and science, but has significant difficulty with reading comprehension, which affects his success in English and social studies. His receptive and expressive vocabularies are significantly below age level, but he can master concepts that are represented visually. He is particularly good at using formulas in math, but has difficulty knowing which formulas to use to solve mathematical problems. Raj often has difficulty completing assignments, even in math and science, because he is rigid about how they should look, insisting on starting his work over if he makes errors. He is interested in computers and this might be an area for possible training and employment in the future.

Raj has strengths as well as difficulties in social relationships. His poor judgement and inflexibility have had a disruptive effect on the lives of his parents and siblings. However, overall family relationships are good. He follows family routines well as long as they are predictable. He has poor eye contact when talking to people outside his family, and does not follow social rules for personal space and touching. Raj loves to work independently on the computer and is a *Star Trek* fan, but he has poor group leisure skills. He is often excessively social with both familiar people and strangers, e.g., he touches inappropriately, sometimes attempting to kiss people. He has few friends at school because other students find his behaviour strange, even threatening. Raj has developed self-care skills but doesn't follow them regularly, so his hygiene and appearance contribute to poor peer acceptance.

Raj has serious problems with social judgment, cannot handle money wisely (will give it to anyone who asks), and becomes anxious when routines at home or school are changed. When anxious, Raj pulls at his hair and recites dialogue from *Star Trek* rapidly. For example, when his normal bus route to school was changed, he refused to get off the bus and recited *Star Trek* dialogue until the principal came onto the bus and talked him into the school.

Raj's preoccupation with the computer and *Star Trek* can be problematic. He does not realize that other people might not be similarly interested. He often tries to start conversations in the middle of a story plot and does not understand when other people do not know the stories. Raj's parents have started to lock the door to his bedroom at night so he does not wander the house. He has been known to stay on *Star Trek* chat rooms on the Internet all night.

Format A **Individualized Program Plan** **Student Name:** Rajinder

Student Information

Date: October 03, 200X

Student I.D.# 10598765

Sex: ☒ M ☐ F

Name: Rajinder

Birth date: August (month) 15 (Day) 198X (Year)

Address:

Telephone No.:

Parent/Guardian: Radhuri and Ravi

School: Hypothetical High School

Grade/Learning Group: 11

Relevant Medical Information

Dr. Physician, Child Psychiatrist Report* (May, 199X):

- Autism spectrum disorders with uneven cognitive functioning
- Disorders in social interaction and social communication; failure to develop peer relationships
- Lack of perception that others have different point of view
- Preoccupation and stereotypical behaviours associated with preoccupation (*Star Trek*)
- Poor eye contact and unusual body language and gestures; inappropriate, at times sexually intrusive touching

IPP Team Members	**Position**
W. Mathews	School Administrator
Radhuri and Ravi	Parents
J. Reiche	Resource Teacher
P. O'Grady	Classroom Teacher
G. Eady	Teacher Assistant
R. Lannigan	Speech-language Pathologist
S. Ellis	Home Support Worker

Additional Information

Format A **Individualized Program Plan (cont'd)** **Student Name:** Rajinder

Special Education and Related Services (additional school staff/support personnel/agencies)

Resource Teacher – J. Reiche
Teacher Assistant – G. Eady
Classroom Teacher – P. O'Grady
Speech-language Pathologist – R. Lannigan
Home Support Worker – S. Ellis

Areas of Strength

- mathematics computation
- basically friendly toward people
- likes computer software, hardware and the Internet
- interested in space travel, especially *Star Trek*

Areas of Need

- to develop strategies for dealing with change
- to develop expressive vocabulary
- to improve reading and writing skills
- to improve completion of assignments
- to develop social behaviours and workplace social skills
- to develop a sense of ownership (self and others)
- to develop positive ways to assert himself in a nonthreatening manner

Required Classroom Accommodations (changes to instructional and evaluative strategies, materials and resources, facilities or equipment)

- provide extended time limits on written exams and assignments
- use visual cues to support processing of oral language
- use key visuals and graphic organizers to support understanding of written language
- use visual strategy cards to aid memory
- use computer word processor for written assignments
- provide advanced warning (nonverbal cues) about transitions in class activities
- provide directed instruction in strategies for vocabulary development and word recognition
- provide modelling and explicit instruction in social skills strategies, e.g., scripting and planning in advance of the situation, visually scripted instructional routines for tasks and transitions, verbal rehearsal of directions

Format A **Individualized Program Plan (cont'd)** **Student Name:** Rajinder

Assessed Level of Educational Performance, e.g., teacher observation, interview, informal and formal testing

Date Given	Tests	Results
June 199X	– Key Math	– Grade 8.2
Grade 7	– Gates-McGinitie Reading Comprehension	– Grade 3.6
	– Gates-McGinitie Spelling	– Grade 6.0

Summary of Assessed Level of Educational Performance

Rajinder's receptive and expressive vocabularies are significantly below age level. He does well with mathematics computations but has difficulty with problem solving. He is reading significantly below age level.

Format A **Individualized Program Plan (cont'd)**

Student Name: Rajinder

Long-term Goal: Raj will develop increasing control of strategies that will assist him in anticipating transitions and effectively coping with changes.

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
1. By November, upon arrival at school each morning, Raj will plan and organize his morning and afternoon schedule using a computer scheduling program.	November 30	– resource teacher support and observation	– achieved
2. By January, when given a visual cue of an upcoming transition, e.g., five minutes to end of class signal, Raj will use his schedule to check off the completed activity and confirm his next activity on 100 percent of opportunities.	January 30	– teacher aide observation	– achieved; Raj consistently uses his schedule at the end of each class.
3. By May, when presented with a planned change to his typical routine, e.g., no video on Wednesday because of school assembly, Raj will use his computer-created schedule to confirm the replacement activity and re-schedule his routine activity without raising objections on 75 percent of opportunities.	May 30	– resource teacher observation – parent observation (home)	– changes to his schedule remain an issue for Raj. Another strategy should be explored for next year in consultation with his parents, who report similar difficulties at home.

Format A **Individualized Program Plan (cont'd)** **Student Name:** Rajinder

Long-term Goal: Raj will improve his functional use of language in various settings, e.g., school, workplace, community.

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
Expressive written language targets:			
1. By November, using computer word processing, Raj will add five new words and supporting sentences to his personal vocabulary dictionary each week.	November 30	– teacher observation of written product – expressive vocabulary checklist	– achieved
2. By January, when working on weekly journal assignments, Raj will use an accumulated total of 50 new words throughout the journal entries.	January 30	– resource teacher observation – data collection checklist	– achieved
Expressive oral language targets:			
3. By March, when participating in planned conversations with the teacher/TA, Raj will use up to five new vocabulary words in 70 percent of his conversations.	March 30	– speech-language pathologist will script planned conversations – teacher will measure criteria	– achieved in May
4. By June, when at school or work experience site, Raj will initiate a conversation with a peer or fellow worker and maintain the conversation for five minutes on four out of six opportunities.	June 01	– teacher/TA observation	– continued practice with social scripts needed. When prompted, Raj is able to initiate an exchange. He has difficulty taking turns in conservations.

Format A Individualized Program Plan (cont'd)

Student Name: Rajinder

Long-term Goal: Raj will develop skills for appropriate social interactions with others.

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
1. By October, when presented with a series of social script pictures, Raj will choose the social convention, e.g., shake hands, hug, smile or say hello, appropriate to the situation, e.g., greeting a friend, family, teacher, new acquaintance.	October 30	– resource teacher/TA observation – parent/home support worker observation (home)	– achieved
2. By January, Raj will demonstrate understanding of appropriate and inappropriate touch, by shaking hands upon greeting, hugging family appropriately or responding appropriately to accidental touch on 100 percent of opportunities.	January 30	– resource teacher/TA observation – parent/home support worker observation (home)	– achieved; Raj greets new people with a handshake. Raj now hugs family members without touching personal parts of their bodies.
3. By March, when given a nonverbal signal by an adult or peer, Raj will stand or sit leaving a comfortable space between himself and others on 100 percent of opportunities.	March 30	– resource teacher/TA observation – parent/home support worker observation (home)	– achieved
4. By June, without prompting, Raj will demonstrate understanding of personal space by standing or sitting a comfortable distance from others on 75 percent of opportunities.	June 01	– resource teacher/TA observation – parent/home support worker observation (home)	– achieved

Format A Individualized Program Plan (cont'd)

Student Name: Rajinder

Long-term Goal: Raj will develop skills to support himself in the workplace.

Short-term Objectives Related to Long-term Goal (observable/measurable)	**Review Dates**	**Assessment Procedures**	**Results and Recommendations**
1. By November, prior to going to the work experience site in the morning, Raj will independently complete his personal hygiene checklist for five days consecutively.	November 30	– parent/home support worker observation – resource teacher observation	– achieved
2. By November, during his work experience placement, Raj will arrive on time for five consecutive days.	November 30	– teacher aide observation	– achieved
3. By December, when at the work experience site, Raj will independently use a visual instructional routine (five picture script of rules) to follow work place rules on a daily basis.	December 15	– teacher aide observation	– achieved
4. By March, when at the work site, Raj will use appropriate conversational topics unrelated to *Star Trek* in 90 percent of his interactions with co-workers.	March 30	– teacher aide observation	– continued work is needed to broaden Raj's range of conversational topics
5. By June, while at the work site, Raj will use a visual instructional routine (six-step picture script of component assembly) without prompting to independently assemble Acro Electronics materials on 100 percent of assigned tasks.	June 01	– resource teacher/TA observation	achieved

Format A **Individualized Program Plan (cont'd)** **Student Name:** Rajinder

Transition Plans (recommendations, services required, strategies and materials that were effective)

Raj's mastery of the work experience assembly tasks and the use of other job-related social skills were both excellent.
Summer employment opportunities will be explored at Acro Electronics. Acro has also asked Raj to return next year, and staff are planning a work experience placement for half days in September. TA support at the job site will be faded with a goal of Raj attending Acro independently by November. Jobsite skills will be reinforced at school and home. Participating in a community activity should be explored and supported by school and family next school year.

Signature of IPP Team Members (Signature indicates that you understand the IPP)

Parent/guardian ____________________
Student (if applicable) ____________________
Principal or designate ____________________
Teacher(s) ____________________

Other team members ____________________

Format A Individualized Program Plan (cont'd)

Student Name: Rajinder

Annual Review and Recommendations

Goals Achieved

- Raj successfully uses his computer to create personalized schedules and uses them independently.
- Raj appears to have mastered the difficulty with inappropriate touch. He is starting to grasp the concept of ownership.
  Significant effort was placed on these goals so Raj could safely move ahead with transition plans and work experience.

Strategies That Worked Well

- Raj made an extensive personal dictionary and used the new words in Communications assignments, however he has not transferred these words into his work for other courses.
- Instructional routines (visual scripts of the task) were effective in increasing Raj's independence at the work experience site and in completing assignments in class.
- Schedules displaying plans, including computer time at home, posted in several locations in the house, helped Raj comply with family rules about chat rooms.

Goals Requiring Ongoing Focus

- Oral vocabulary growth has been limited. Practise using his personal vocabulary dictionary in other settings will help Raj generalize language use across settings.
- Broaden Raj's range of conversational topics. Raj still does not initiate conversations with peers on topics of interest other than *Star Trek*.
- Raj continues to have difficulty with changes (even when he has created a schedule to reflect them). Another strategy should be explored for next year in consultation with his parents who report similar difficulties at home.

Support Services Required

Teacher assistant support will need to continue at the present level for the start of the school year. Gradual fading of teacher assistant support at the work experience site is a target for next year.

Recommendations

Raj is earning C to C+ grades in his courses with adaptations.
Mathematics: The trial auditing of Math 14 to give Raj a chance to work on problem solving was marginally successful. When given models for each type of problem, he can successfully carry out the computation steps; choosing a strategy is still a significant difficulty. Steps in problem solving should be a focus for next year.

Communication: Continued focus on developing Raj's expressive vocabulary and functional expressive use of language. Practise using his personal vocabulary dictionary in settings other than school should be continued next year. Developing reading comprehension strategies to reinforce work place skills is also necessary.

Appendices

Home–School Communication Book

Teachers and families may decide that a home–school communication system would be beneficial. Information recorded by teachers and family members should be relevant information that can be used to enhance instruction, management of behaviour, or personal care of the student. Teachers and parents can work together to make a list of key questions and decide on how frequently they need to be reported, and how the communication book will travel back and forth. The form should be designed specifically for the student. The following example is adapted from an individualized communication book for a Grade 3 student.

Daily Log for Daniel Date: ____________________

Comments/concerns/questions/friendly reminders from home:

Parent signature: ____________________

Participation in today's classroom activities

Activity	*Satisfactory participation*	*Partial participation*	*Did not participate*
Circle	☐	☐	☐
Music/Art	☐	☐	☐
Language Arts	☐	☐	☐
Mathematics	☐	☐	☐
Physical Education	☐	☐	☐
Social/Science	☐	☐	☐
Other:	☐	☐	☐

Comments/concerns/questions/friendly reminders from school:

Teacher's signature: ____________________

Integrating IPP Goals with Regular Class Activities

Once teachers have developed an IPP for a student, the next step is to fit these activities into the regular schedule. Some strategies may need to take place in other settings, but for students who are receiving their programs and services in integrated class placements, a chart like the one below may help teachers plan.

IPP Goals	Regular Class Activities								
	Arrival	Journal Writing	Recess	Language Arts	Lunch	Physical Education	Social Studies	Science	Dismissal
Develop Social Skills	Practise greeting people by name	Use communication book with teaching assistant	Participate in organized games	Take part in co-op reading group	Practise courtesy rules during eating and socializing	Practise taking turns	Work at centre with peer helper	Work at centre with peer helper	Line up with friends to wait for parent
Improve Decision Making	Choose place in line	Pick topic from communication book	Choose between two games	Choose book for group to read	Decide order to eat food	N/A	Decide between two centres	Decide between two centres	Choose who to stand with in line
Staying on Task	Complete routine of storing belongings	Stay on task for 10 minutes	Stay with the game chosen	Remain in group during activity	Finish lunch and remain seated for 15 minutes	Stay in group for activity	Stay in centre for at least 10 minutes	Stay in centre for at least 10 minutes	Complete routine of retrieving belongings and homework
Participating in Group Activities	Enter with classmates	N/A	Play with classmates	Answer questions about story, using communication book	Help with clean up in groups	Play with peers	Peer pairs	Peer pairs	Exit with classmates
Lengthen Interacting Behaviour	Extend greeting to interaction with communication book	Connect communication from two pages in the communication book	Stay with game as long as peers do	Use more than one page in book to answer questions	N/A	Practise gesture communication with peers in group	Increase peer session to 15 minutes	Increase peer session to 15 minutes	N/A

A blank form that can be adapted for individual students is included on the next page.

Integrating IPP Goals with Regular Class Activities

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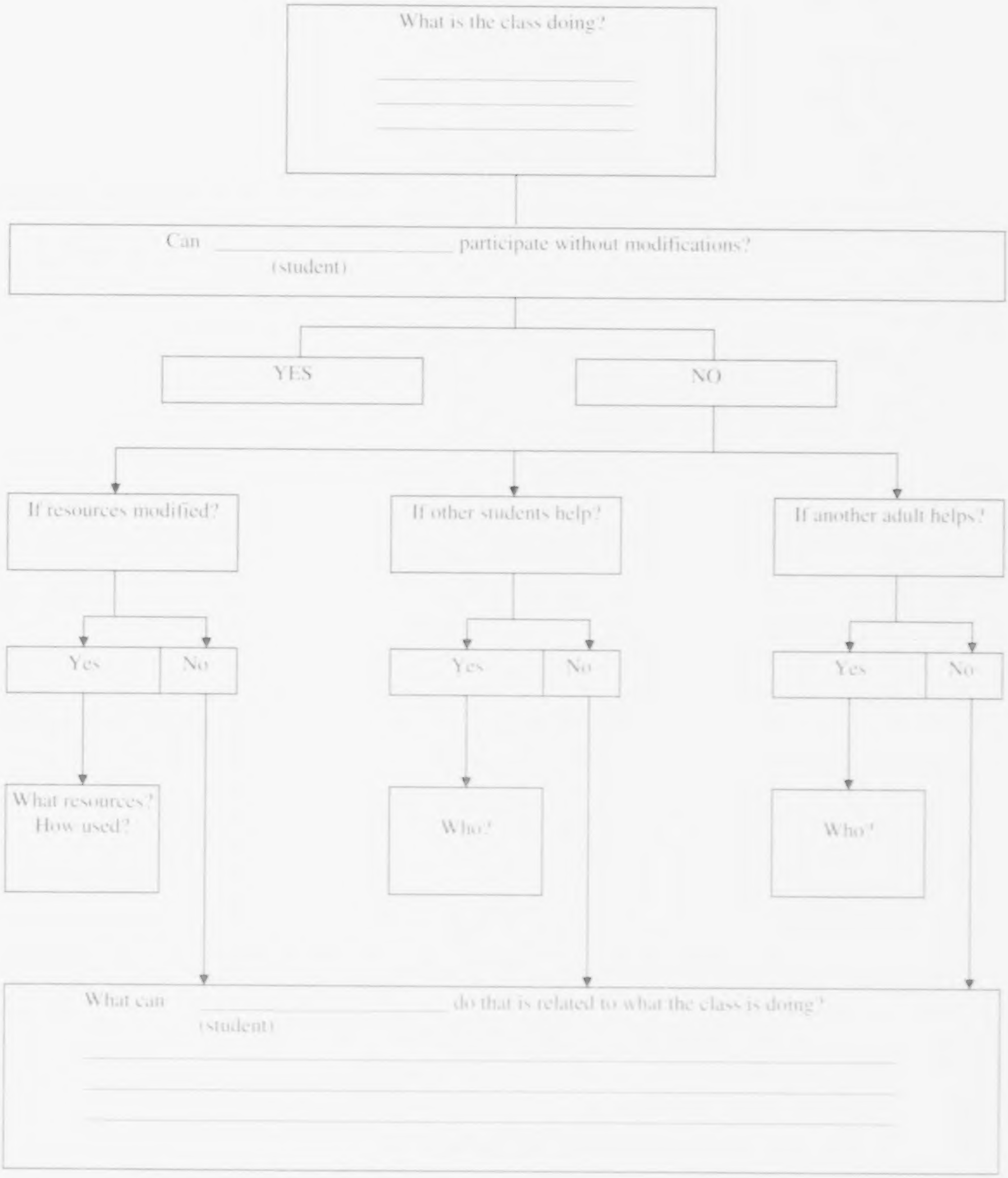
Improve Decision Making	Choose place in line	Pick topic from communication book	Choose between two games	Choose book for group to read	Decide order to eat food	N/A	Decide between two centres	Decide between two centres	Choose who to stand with in line
Staying on Task	Complete routine of storing belongings	Stay on task for 10 minutes	Stay with the game chosen	Remain in group during activity	Finish lunch and remain seated for 15 minutes	Stay in group for activity	Stay in centre for at least 10 minutes	Stay in centre for at least 10 minutes	Complete routine of retrieving belongings and homework
Participating in Group Activities	Enter with classmates	N/A	Play with classmates	Answer questions about story using communication book	Help with clean up in groups	Play with peers	Peer pairs	Peer pairs	Exit with classmates
Lengthen Interacting Behaviour	Extend greeting to interaction with communication book	Connect communication from two pages in the communication book	Stay with game as long as peers do	Use more than one page in book to answer questions	N/A	Practise gesture communication with peers in group	Increase peer session to 15 minutes	Increase peer session to 15 minutes	N/A

A blank form that can be adapted for individual students is included on the next page.

____
Name of Student

Student's IPP Goals	**Regular Class Activities**								
Goal 1									
Goal 2									
Goal 3									
Goal 4									
Goal 5									

Modification Planning Form


What is the class doing?
Can ____________ participate without modifications?
(student)
YES
NO
If resources modified?
If other students help?
If another adult helps?
Yes
No
Yes
No
Yes
No
What resources? How used?
Who?
Who?
What can ____________ do that is related to what the class is doing?
(student)

Hierarchy of Prompts

A typical prompt hierarchy consists of:

- (I) independent—natural cue or stimulus (bell rings to indicate recess)
- (G) gestural prompt—a gesture or demonstration that provides information regarding the nature of the required response (head shake to indicate disapproval)
- (IV) indirect verbal prompt—the use of words to imply that some behaviour needs to occur (where do you need to go next?)
- (V) direct verbal prompt—clearly states the necessary behaviour (verbal or some alternative mode of communication)
- (M) model—a visual or physical demonstration that shows the correct completion of the activity or task and encourages imitation
- (MP) minimal physical prompt—light physical contact to guide a student toward a behaviour
- (PP) partial physical prompt—the teacher physically starts the student in the desired behaviour but releases the student to complete the behaviour, or part of the student's physical movement is moulded by the teacher
- (F) full physical prompt—the student is taken through correct completion of the activity or task; the physical movement of the student is completely moulded by the teacher.

The most effective cues are those natural to the situation in which the desired behaviour is to occur. Collect data on a student's performance to make decisions on how and when to gradually remove prompts. If not removed at the appropriate time, students quickly become dependent upon artificial or intense levels of prompts.

From Alberta Education, *Essential and Supportive Skills for Students with Developmental Disabilities* (Edmonton, AB: Alberta Education, 1995), p. ESS 21.

Task Analysis: Removing Outer Clothing

STUDENT'S NAME: ____________________

TASK: Removing outer clothing

Date											
Places boots on shelf											
Enters classroom											
Walks to coat hooks											
Locates own hook											
Hangs bag up											
Removes mittens											
Places mittens in pocket											
Removes scarf											
Hangs on hook											
Unzippers jacket											
Hangs on hook											
Removes ski pants											
Hangs on hook											

PROMPTING HIERARCHY

I – Independent
G – Gesture
IV – Indirect verbal
What do you need to do next?
V – Direct verbal, "You need to borrow"
M – Model using sample
MP – Minimal physical prompt
PP – Partial physical prompt
F – Full physical prompt

From Alberta Education, *Essential and Supportive Skills for Students with Developmental Disabilities* (Edmonton, AB: Alberta Education, 1995), p. ESS.35

Task Analysis: Using the Bathroom

STUDENT'S NAME: ______________________

TASK: Using the bathroom

Date											
Requests/goes on command											
Locates bathroom											
Turns doorknob											
Opens door											
Enters bathroom											
Closes door											
Pulls pants down											
Sits on toilet											
Voids											
Wipes self											
Gets off toilet											
Pulls pants up											
Flushes toilet											
Walks to sink											
Turns on water											
Washes hands											
Turns off water											
Dries hands											
Opens door											
Returns to previous location											

PROMPTING HIERARCHY

I – Independent
G – Gesture
IV – Indirect verbal
What do you need to do next?
V – Direct verbal, "You need to borrow"
M – Model using sample
MP – Minimal physical prompt
PP – Partial physical prompt
F – Full physical prompt

From Alberta Education, *Essential and Supportive Skills for Students with Developmental Disabilities* (Edmonton, AB: Alberta Education, 1995), p. ESS.40.

Task Analysis: Participating in Morning Circle

STUDENT'S NAME: ______________________

TASK: Participating in morning circle

Date											
Attendance functions: • sits on rug in semicircle											
• waits quietly for teacher											
• orientates to teacher											
• listens for name to be called											
• responds "here" when name called											
• sits "ready," hands on lap, legs crossed											
• listens to teacher identify helper											
• if helper, takes message to office											
Show-and-tell functions: • puts hand up to indicate participation											
• puts hand down, waits for teacher to call											
• removes show-and-tell from bag											
• stands up											
• tells three things about item											
• passes to other students											
• sits down											
• puts item in bag											
• listens/watches other students											
• passes items to next student											
Directions for morning functions: • remains seated quietly											
• listens to teacher instructions											
• remembers routine of morning											
• stands up when teacher is finished											
• carries show-and-tell to shoe cubby hole											
• puts item in cubby hole											
• goes to location as directed in previous instructions											

PROMPTING HIERARCHY

I – Independent
G – Gesture
IV – Indirect verbal
What do you need to do next?
V – Direct verbal. "You need to borrow"

P – Student is led through the response
M – Model using sample
MP – Minimal physical prompt
PP – Partial physical prompt
F – Full physical prompt

From Alberta Education, *Essential and Supportive Skills for Students with Developmental Disabilities* (Edmonton, AB: Alberta Education, 1995), p. ESS.36.

Task Analysis: Single-digit Addition Using Manipulatives

STUDENT'S NAME: ______________________

TASK: Single-digit addition **PROGRAM:** ______________________

Date												
Identify quantity on left hand side of "+" sign												
Count out blocks to correspond to quantity												
Identify quantity on right hand side of "+" sign												
Count out blocks to correspond to quantity												
Move the two piles of blocks together												
Count all the blocks												
Record number on right-hand side of "=" sign												

PROMPTING HIERARCHY

I – Independent
G – Gesture
IV – Indirect verbal
What do you need to do next?
V – Direct verbal, "You need to borrow"
M – Model using sample
MP – Minimal physical prompt
PP – Partial physical prompt
F – Full physical prompt

Task Analysis: Asking a Peer to Play

STUDENT'S NAME: ______________________

TASK: Asking a peer to play

Date											
Identify peer who is not currently playing with anyone											
Identify activity to play											
Approach peer											
Gain peer's attention by saying name or tapping him or her on the shoulder											
Establish eye contact with peer											
Ask peer if he or she would like to play											
Wait for peer to respond											
Commence activity if peer agrees to play or approach another peer											

PROMPTING HIERARCHY

I – Independent
G – Gesture
IV – Indirect verbal
What do you need to do next?
V – Direct verbal, "You need to borrow"
M – Model using sample
MP – Minimal physical prompt
PP – Partial physical prompt
F – Full physical prompt

Blank Task Analysis Data Sheet

STUDENT'S NAME: ______________________________

TASK: ______________________________ **PROGRAM:** ______________________________

Date												

PROMPTING HIERARCHY
I – Independent
G – Gesture
IV – Indirect verbal
What do you need to do next?
V – Direct verbal, "You need to borrow"
M – Model using sample
MP – Minimal physical prompt
PP – Partial physical prompt
F – Full physical prompt

From Alberta Education, *Essential and Supportive Skills for Students with Developmental Disabilities* (Edmonton, AB: Alberta Education, 1995), p. ESS.23.

Likes and Dislikes Chart: Student Preferences

When planning reinforcers for instruction and behaviour interventions, it is important to know the preferences of students. This chart can be used to record a student's preferred activities, sensory stimuli, edibles, social reinforcers, etc. Such information changes, and the chart should be revised frequently to reflect current likes and dislikes.

Student name: ______________________ **Date revised:** ______________

LIKES	DISLIKES	INDIFFERENCES
Activities:	**Activities:**	**Activities:**
Sensory Stimuli:	**Sensory Stimuli:**	**Sensory Stimuli:**
Edibles:	**Edibles:**	**Edibles:**
Social Reinforcers:	**Social Reinforcers:**	**Social Reinforcers:**

Adapted with permission from Jo-Anne Seip, *Teaching Students with Autism and Developmental Delays: A Guide for Staff Training and Development* (Delta, BC: Gateway Press, 1996), p. 55.

Checklist of School Reinforcers

Student: ______________________ Teacher: ____________________ Date: ____________________

Instructions: Circle the reinforcers that are most effective in the classroom with this student.

MATERIAL REINFORCERS

- Points
- Tokens (including stickers and stars)
- Food
  - pretzels
  - popcorn
  - candy
  - cookies
  - soft drinks
  - fruit
  - marshmallows
  - crackers
  - chips
  - juices
  - raisins
  - cake
  - ice cream
  - other preferred foods
- Badges, pins, ribbons
- Books
- Cards (letter, flash, picture)
- Magazines
- Puzzles
- Toys
  - kaleidoscope
  - flashlight
  - playground equipment
  - balloons
  - punching bag toys
  - commercial games
  - marbles
  - jacks
  - plastic toys (animal, people)
  - yo-yo
  - modelling clay
  - household items (pots, coffee cans, boxes, plastic jugs)
  - twirlers or fans
  - bean bags
  - sand pictures
  - toy musical instruments
  - whistles
  - dolls
  - make-up kits
  - stuffed animals or fuzzy toys
  - cars, trains, trucks
  - construction toys
  - beads
  - party toys
- Computer games
- Radio
- Stereo/record player
- Tape recorder
- TV
- Filmstrips/movies
- Viewmaster
- Photo albums
- Class pictures
- Maps
- Globes
- Vibrator/massager
- Golf counter/timer
- Calendars
- Paints and related art equipment
- Money for classroom bank and store
- Subject-matter accessories

ACTIVITY REINFORCERS

- Deliver messages/run errands in building
- Custodian helper
- Teacher helper
- Take specific equipment to recess
- Free-time, student-selected activity
- Work with older students in building
- Help in lunchroom
- Water classroom plants
- Feed classroom animals
- Sharpen pencils
- Visit principal or other building staff
- Any classroom clean-up activity
- Recess
- Operate classroom equipment
- Visit other classes
- Distribute and collect classroom materials
- Take part in a school play or assembly
- Help other students
- Mainstreamed activity classes
- Display student work
- Free time with no contingencies
- Self-graphing
- Climbing and locomotor activities
- Typing
- Read a book or magazine
- Walk to a designated community location
- Field trips
- Select location for field trip
- Turn lights on/off
- Decorate own bulletin board
- Read a wall map
- Read subject matter of interest
- Engage in self-stimulatory activity
- Select reinforcers
- Plan daily schedules
- Puppet show participation
- Musical chairs game
- Make material reinforcers
- Cook edible reinforcers
- Organize eating area (setting table, getting juice from fridge)
- Show and Tell
- Listen to music
- Bounce on bounceboard
- Parties
- Skating
- Watch filmstrips/movies
- Listen to tapes, records
- Play musical instruments
- Play a game with adults or peers

SOCIAL REINFORCERS

- Verbal praise (specific to student)
- Smiles
- Laughter
- Tickling
- Winks
- Head nods
- Approval signs (OK gesture)
- Any positive peer/adult activities (social)
- Any positive interactions with adults
- "Goof-off" periods
- Being responsible for other students
- Attention when talking
- Hugs, handshakes
- Physical contact (pat on back or shoulder, quick squeezes, touching arm)
- Wrestling
- Parties, recess, free time
- Special seating privileges
- Helper privileges
- Sitting in bean bag chair with peers

From Richard L. Simpson and Madelyn Regan, *Management of Autistic Behavior* (Austin, TX: Pro-Ed, 1988), Exhibit 4–3, page 4:6. Reproduced with permission from Pro-Ed, Inc.

Communication Dictionary

Communication attempts made by students with autism may be misunderstood or mistakenly ignored. These attempts can be analyzed and recorded in an individualized communication dictionary that all people interacting with the student can use. People can refer to the dictionary to help them understand and interpret the student's communication. Planned responses that support language development correspond to each attempt, while still acknowledging the attempts. At the same time, caution should be exercised to avoid reinforcing inappropriate behaviours, even if they are effective communication attempts.

What the student does	What it might mean	How adults will respond
Reaches for food item	asking for the food item	Say, "want (food item)" and give the student a small sample of the item.
Says "Boo-chm"	asking for computer time	Point to picture of computer on pictoboard, and say "computer." Allow access to computer.
Falls prone on the floor	protesting or refusing	Do not respond to the protest. Assist student to stand up, saying "stand up," and continue task. (Acting on the protest could reinforce this maladaptive behaviour. Teach appropriate protest communication at another time and reinforce.)

______________________________'s Interpretation Dictionary

STUDENT'S NAME

What ____________ does	What it might mean	How to respond ______________

Adapted with permission from B.C. Provincial Outreach Program for Autism and Related Disorders.

Behaviour Observation and Data Collection Chart

When determining the function of inappropriate target behaviours to plan behaviour change interventions, schools need to observe the behaviour and collect information. It is important to document the behaviour as factually as possible. Rather than speculating on the function of behaviour in the absence of good data, it is important to gather facts that are observable and measurable:

Antecedent: events in the environment that occur immediately prior to the target behaviour

Behaviour: actual behaviour, described in specific terms (including duration and intensity)

Consequence: events in the environment that occur directly after the behaviour.

A–B–C Chart

Name of student: ______________________

Target behaviour: ______________________

Date: ______________________

Time, setting, social situation	Antecedent event(s)	Behaviour description	Consequence event(s)

Adapted with permission from Jo-Anne Seip, *Teaching Students with Autism and Developmental Delays: A Guide for Staff Training and Development* (Delta, BC: Gateway Press, 1996), p. 51.

Appendix J

Motivation Assessment Scale

Name ____________________ Rater ________________ Date ________________

Behaviour Description ____

____

Setting Description ____

Instructions: The *Motivation Assessment Scale* is designed to identify those situations in which an individual is likely to behave in certain ways. From this information, informed decisions can be made concerning the selection of appropriate reinforcers. To complete the scale, select a specific behaviour. "Aggressive," for example, is not as good a description as "hits his sister." Once you have specified the behaviour to be rated, read each question carefully and circle the number that best describes your observations of this behaviour.

0 = Never, 1 = Almost Never, 2 = Seldom, 3 = Half the Time, 4 = Usually, 5 = Almost Always, 6 = Always

	QUESTIONS	RATING						
1.	Would the behaviour occur continuously if the student were left alone for several hours?	0	1	2	3	4	5	6
2.	Does the behaviour occur following a request to perform a difficult task?	0	1	2	3	4	5	6
3.	Does the behaviour seem to occur in response to you talking to other students?	0	1	2	3	4	5	6
4.	Does the behaviour occur to get a toy, food or activity that the student has been told he or she can't have?	0	1	2	3	4	5	6
5.	Would the behaviour occur repeatedly, in the same way, for long periods of time, if no one were around? (For example, rocking back and forth for over an hour.)	0	1	2	3	4	5	6
6.	Does the behaviour occur when any request is made of the student?	0	1	2	3	4	5	6
7.	Does the behaviour occur whenever you stop attending to the student?	0	1	2	3	4	5	6
8.	Does the behaviour occur when you take away a favourite toy, food or activity?	0	1	2	3	4	5	6

Adapted from V. Mark Durand, *Severe Behavior Problems: A Functional Communication Training Approach* (New York, NY: The Guilford Press, 1990), pp. 176–178. Adapted with permission from The Guilford Press. **Further reproduction of this page is not permitted**.

	QUESTIONS	RATING						
9.	Does it appear that the student enjoys performing the behaviour? (It feels, tastes, looks, smells and/or sounds pleasing.)	0	1	2	3	4	5	6
10.	Does the student seem to do the behaviour to upset or annoy you when you are trying to get the student to do what you ask?	0	1	2	3	4	5	6
11.	Does the student seem to do the behaviour to upset or annoy you when you are not paying attention? For example, if you are sitting in a separate room, interacting with another student.	0	1	2	3	4	5	6
12.	Does the behaviour stop occurring shortly after you give the student the toy, food or activity he or she has requested?	0	1	2	3	4	5	6
13.	When the behaviour is occurring, does the student seem calm and unaware of anything else going on?	0	1	2	3	4	5	6
14.	Does the behaviour stop occurring shortly after (one to five minutes) you stop working or making demands of the student?	0	1	2	3	4	5	6
15.	Does the student seem to do the behaviour to get you to spend some time with him or her?	0	1	2	3	4	5	6
16.	Does the behaviour seem to occur when the student has been told that he or she can't do something?	0	1	2	3	4	5	6

	Sensory	Escape	Attention	Tangible
	1. ________	2. ________	3. ________	4. ________
	5. ________	6. ________	7. ________	8. ________
	9. ________	10. ________	11. ________	12. ________
	13. ________	14. ________	15. ________	16. ________
Total Score =	________	________	________	________
Mean (Average) Score =	________	________	________	________
Ranking =	________	________	________	________

Adapted from V. Mark Durand, *Severe Behavior Problems: A Functional Communication Training Approach* (New York, NY: The Guilford Press, 1990), pp. 176–178. Adapted with permission from The Guilford Press. **Further reproduction of this page is not permitted**.

Behaviour Support Plan

Re: ____________________

Objective: To ensure that staff working with ____________________ are aware of behaviour support procedures in place to maintain a healthy environment for ____________________, other students and staff.

Rationale: ____________________, on occasion, will ____________________
____

Key Understandings About

____
____
____
____
____

Plan:

- Staff working with ____________________ will read and sign this plan.
- Be aware of antecedent events. This behaviour is most likely to occur when:
  - ____
  - ____
  - ____
  - ____
- Be aware of warning signs (escalating behaviours)
  - ____
  - ____
  - ____
  - ____

These behaviours are communicative in nature and indicate that ____________________ is having difficulty.

▶ Immediate measures (list plans to diffuse the situation)

- ____________________
- ____________________
- ____________________
- ____________________

▶ Implement positive behaviour supports (describe proactive strategies to use consistently to support students that increase their abilities to communicate their wants and needs, and that teach alternative, more acceptable responses to frustration).

- ____________________
- ____________________
- ____________________
- ____________________
- ____________________
- ____________________
- ____________________

▶ Help peers learn to:

- ____________________
- ____________________
- ____________________

▶ Staff will (include any other measures that staff need to take):

- ____________________
- ____________________
- ____________________

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▶ Reactive Plan—In spite of proactive strategies, if aggressive or unsafe behaviour occurs, the following plan is in place (list a plan for dealing with escalating behaviour that includes steps and staff responses for each level of escalation).

- ______________________________
- ______________________________
- ______________________________
- ______________________________

I have read this plan and am aware of support procedures to be followed when working with__________________.

Note: A copy of this plan should be kept in the office and be read by school personnel before they begin working with the student.

Team members' signatures:

______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________

Date:

____

Review date:

____

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Resources

Regional Educational Consultation Services

Three specialized consulting teams offer regional educational consultation services to help school jurisdictions and private ECS operators provide individualized programs for students with complex needs. To be eligible for services, a chartered psychologist or psychiatrist must have diagnosed the student with a Pervasive Developmental Disorder. In addition, the severity of the disorder must be such that a highly specialized program is required.

Each consulting team provides the following on-site services to assist eligible students: individual assessment, consultation and inservice/staff development activities. Alberta Learning subsidizes services costs.

For complete eligibility criteria, contact the Alberta Learning Specialized Consulting Team providing educational support in your area.

Coordinated Assessment Services for the Exceptional (CASE)
(Grande Prairie School District No. 2357)
Crystal Park School
9351 – 116 Avenue
Grande Prairie, AB T8V 6L5
Telephone: 780–539–0333
Fax: 780–539–7613

Edmonton Public Schools Consulting Services
(Edmonton School District No. 7)
Centre for Education
1 Kingsway Avenue
Edmonton, AB T5H 4G9
Telephone: 780–429–8256
Fax: 780–426–0098

Regional Educational Assessment and Consultation Services (REACH)
(Calgary School District No. 19)
Emily Follensbee Centre
5139 – 14 Street S.W.
Calgary, AB T2T 3W5
Telephone: 403–777–6983
Fax: 403–777–6997

Diagnostic Services

Alberta Children's Hospital
1820 Richmond Road S.W.
Calgary, AB T2T 5C7
Telephone: 403–229–7211

The hospital offers diagnostic and assessment services for children with Pervasive Developmental Disorders through a variety of clinics and programs. Therapeutic services, i.e., Occupational Therapy, Speech Therapy, are offered on a time-limited basis to preschool-aged children with autism. Children must be referred to a clinic or program by their family physician or pediatrician.

Children's Services Centre
401 – 5000 Gaetz Avenue
Red Deer, AB T4N 6C2
Telephone: 403–340–2606

The centre offers both centre-based and home-based early intervention programs, and assessment and diagnostic services. Other programs and services include: intensive program assessments with community follow-up, parent support groups, resource library and scheduled autism clinics.

Glenrose Rehabilitation Hospital
10230 – 111 Avenue
Edmonton, AB T5G 0B7
Telephone: 780–471–2262

Assessment and diagnostic services are offered through the Preschool Assessment Service and the School Age Neurodevelopmental Clinic. Medical follow-up is also available for children with autism. Services are delivered via a multidisciplinary team of professionals.

Internet Resources

Autism Research Institute

http://www.autism.com/ari

This site provides information about both conventional and alternative forms of therapy.

Autism Society of America

http://www.autism-society.org

This site provides an overview of autism, information on educating students with autism, and additional resources, organizations, list-serves and links.

Autism Treatment Services of Canada

http://www.autism.ca

This site provides information on autism, as well as practical suggestions for the classroom and ideas for integration.

Cambridge Center for Behavioral Studies

http://www.behavior.org

This site provides information regarding Applied Behaviour Analysis.

Center for the Study of Autism

http://www.autism.org

This site provides information on autism and related disorders, with numerous features and links to other sites.

Geneva Centre for Autism

http://www.autism.net

The site provides information about autism, and upcoming workshops and conferences.

Tony Attwood

http://tonyattwood.com

This site focuses primarily on Asperger's Syndrome. It provides teaching suggestions and highlights appropriate behaviour management strategies.

Treatment and Education of Autistic and related Communication handicapped CHildren (TEACCH)

http://www.teacch.com

This site highlights the philosophy and strategies associated with the TEACCH program in North Carolina.

Organizations

Autism Society of Alberta
Edmonton Autism Society
#101, 11720 Kingsway Avenue
Edmonton, AB T5G 0X5
Telephone 780–453–3971
Fax 780–447–4948

Autism Society Central Alberta

#401 – 500 Gaetz Avenue
Red Deer, AB T4N 6C2
Telephone: 403–346–4636, ext. 102
Fax: 403–340–8193

Autism Calgary Association

Office:
Bay 52, 3033 – 34th Avenue N.E.
Calgary, AB

Mailing Address:
243 Huntcroft Road N.E.
Calgary, AB T2K 4E1
Telephone: 403–250–5033
Fax: 403–250–5033

Video Resources

A is for Autism

Films for the Humanities and Sciences, Princeton, NJ, 1–800–257–5126

- Cartoons made by people with autism to explain what it is like to be autistic

Building Independence Through the Use of Adaptations and Enablers

Institute for the Study of Developmental Disabilities, Indiana University, Bloomington, IN. 812–855–6508

- Strategies that enable students with autism to function more effectively, including teaching ideas

Great Expectations: Living with More Able Levels of Pervasive Developmental Disorder

Geneva Centre for Autism; Toronto, ON, 416–322–7877

- Developing an individualized approach for higher-functioning students with autism and related disorders

Teaching Children with Autism and Related Pervasive Developmental Disorders: Looking Beyond the Labels

Metropolitan Toronto School Board, School Programs and Services Department, North York, ON, 416–397–2509

- Information to foster understanding of autism and strategies for supporting students with severe difficulties in communication and behaviour

Recommended Print Resources

Please note: These titles have been provided as sources of further information on various topics and do not imply Alberta Learning's approval for the use of these resources. Teachers and other district staff need to preview any resources and assess their appropriateness before using them with students or recommending them to others.

General

Autism and Asperger Syndrome (1991) by Uta Frith (ed.). Cambridge, NY: Cambridge University Press.

Breakthroughs: How to Reach Students with Autism (1998) by Karen Sewell. Verona, WI: Attainment Company.

For Parents and Professionals: Autism (1998) by Kathie Harrington. East Moline, IL: LinguiSystems, Inc.

Handbook of Autism and Pervasive Developmental Disorders (2nd edition) (1997) by Donald J. Cohen and Fred R. Volkmar (eds.). New York, NY: John Wiley & Sons, Inc.

Preschool Education Programs for Children with Autism (1994) by Sandra L. Harris and Jan S. Handleman (eds.). Austin, TX: Pro-Ed, Inc.

Targeting Autism: What We Know, Don't Know, and Can Do to Help Young Children with Autism and Related Disorders (1998) by Shirley Cohen. Berkeley, CA: University of California Press.

Understanding the Nature of Autism: A Practical Guide (1996) by Janice E. Janzen. San Antonio, TX: Communication Skill Builders.

The World of the Autistic Child: Understanding and Treating Autism Spectrum Disorders (1996) by Bryna Siegel. New York, NY: Oxford University Press.

ABA/Discrete Trial

"ABA and Academic Instruction" by Glen Dunlap, Lee Kern and Jonathan Worcester. *Focus on Autism and Other Developmental Disabilities* 16, 2 (2001), pp. 129–136.

"Application of ABA Principles to General Communication Instruction" by Billy T. Ogletree and Thomas Oren. *Focus on Autism and Other Developmental Disabilities* 16, 2 (2001), pp. 102–109.

Autism Training Sourcebook (1997) by Indiana Resource Center for Autism. Bloomington, IN: Indiana University, Institute for the Study of Developmental Disabilities.

Behavioral Intervention for Young Children with Autism: A Manual for Parents and Professionals (1996) by Catherine Maurice (ed.). Austin, TX: Pro-Ed, Inc.

Asperger's Disorder

Asperger Syndrome: A Guide for Educators and Parents (1998) by Brenda Smith Myles and Richard L. Simpson. Austin, TX: Pro-Ed, Inc.

Asperger's Syndrome: A Guide for Parents and Professionals (1998) by Tony Attwood. London, U.K.: Jessica Kingsley Publishers Ltd.

Asperger Syndrome: A Practical Guide for Teachers (1998) by Val Cumine, Julia Leach and Gill Stevenson. London, U.K.: David Fulton Publishers.

Autism Awareness

Emergence: Labeled Autistic (1986) by Temple Grandin and Margaret M. Scariano. Novato, CA: Arena Press.

Joey and Sam (1993) by Illana Katz and Edward Ritvo. Northridge, CA: Real Life Storybooks.

Kids with Special Needs: Information and Activities to Promote Awareness and Understanding (1996) by Veronica Getskow and Dee Konczal. Santa Barbara, CA: Learning Works.

Kristy and the Secret of Susan (1990) by Ann M. Martin. New York, NY: Scholastic Professional Books.

Little Rainman (1996) by Karen L. Simmons. Arlington, TX: Future Horizons, Inc.

Russell is Extra Special: A Book about Autism for Children (1992) by Charles A. Amenta. New York, NY: Magination Press.

Thinking in Pictures and Other Reports from My Life with Autism (1995) by Temple Grandin. New York, NY: Doubleday.

Behaviour Support

Behavioral Issues in Autism (1994) by Eric Schopler and Gary B. Mesibov (eds.). New York, NY: Plenum Press.

Functional Assessment and Program Development for Problem Behavior: A Practical Handbook (1997) by Robert E. O'Neill et al. Pacific Grove, CA: Brooks/Cole Publishing.

Solving Behavior Problems in Autism: Improving Communication with Visual Strategies (1999) by Linda A. Hodgdon. Troy, MI: QuirkRoberts Publishing.

Communication

Autism Spectrum Disorders: A Transactional Developmental Perspective (2000) by Amy M. Wetherby and Barry M. Prizant. Baltimore, MD: Paul H. Brookes Publishing Co.

Do-Watch-Listen-Say: Social and Communication Intervention for Children with Autism (2000) by Kathleen Ann Quill. Baltimore, MD: Paul H. Brookes Publishing Co.

The Picture Exchange Communication System Training Manual (1994) by Lori A. Frost and Andrew S. Bondy. Cherry Hill, NJ: Pyramid Educational Consultants, Inc.

Teach Me Language: A Language Manual for Children with Autism, Asperger's Syndrome, and Related Developmental Disorders (1996) by Sabrina Freeman and Lorelei Dake. Langley, BC: SKF Books.

Teaching Children with Autism: Strategies for Initiating Positive Interactions and Improving Learning Opportunities (1995) by Robert L. Koegel and Lynn Kern Koegel (eds.). Baltimore, MD: Paul H. Brookes Publishing Co.

Teaching Children With Autism: Strategies to Enhance Communication and Socialization (1995) by Kathleen Ann Quill (ed.). Albany, NY: Delmar Publishers Inc.

Program Planning

"Build Me a Bridge: Successful Transitions Through the Educational Years for Students with Autism/Asperger's Syndrome" by Sheila Wagner. *Autism-Asperger's Digest*, January/February 2001, pp. 10–11.

Choosing Outcomes and Accommodations for Children: A Guide to Educational Planning for Students with Disabilities (1997) by Michael F. Giangreco, Chigee J. Cloninger and Virginia Salce Iverson. Baltimore, MD: Paul H. Brookes Publishing Co.

A Guide to Successful Employment for Individuals with Autism (1995) by Marcia Datlow Smith, Ronald G. Belcher and Patricia D. Juhrs. Baltimore, MD: Paul H. Brookes Publishing Co.

Higher Functioning Adolescents and Young Adults with Autism: A Teacher's Guide (1996) by Ann Fullerton et al. Austin, TX: Pro-Ed, Inc.

Steps to Independence: Teaching Everyday Skills to Children with Special Needs (3rd edition) (1997) by Bruce L. Baker et al. Baltimore, MD: Paul H. Brookes Publishing Co.

The Syracuse Community-referenced Curriculum Guide for Students with Moderate and Severe Disabilities (1989) by Alison Ford and Roberta Schnorr (eds.). Baltimore, MD: Paul H. Brookes Publishing Co.

What's Next: Preparing the Student with Autism or Other Developmental Disabilities for Success in the Community (1992) by Carol Gray. Arlington, TX: Future Horizons, Inc.

Social Skills

Autism: A Social Skills Approach for Children and Adolescents (1998) by Maureen Aarons and Tessa Gittens. Bicester, U.K.: Winslow Press Limited.

Comic Strip Conversations (1994) by Carol Gray. Jenison, MI: Jenison Public Schools.

"Peer-Mediated Social Intervention for Young Children with Autism" by Phillip S. Strain and Frank W. Kohler. *Seminars in Speech and Language* 19, 4 (1998), pp. 391–405.

"Peer Training to Facilitate Social Interaction for Elementary Students with Autism and Their Peers" by Debra Kamps et al. *Exceptional Children* 68, 2 (2002), pp. 173–187.

Play Time/Social Time: Organizing Your Classroom to Build Interaction Skills (1997) by S. Odom and S. McConnell. Tucson, AZ: Communication Skill Builders.

Skillstreaming the Adolescent: New Strategies and Perspectives for Teaching Prosocial Skills (1997) by Arnold P. Goldstein and Ellen McGinnis. Champaign, IL: Research Press.

Skillstreaming the Elementary School Child: New Strategies and Perspectives for Teaching Prosocial Skills (1997) by Ellen McGinnis and Arnold P. Goldstein. Champaign, IL: Research Press.

Social Skills Intervention Guide: Practical Strategies for Social Skills Training (1991) by Stephen N. Elliott and Frank M. Gresham. Circle Pines, MN: American Guidance Service, Inc.

Social Stories . . . All New Social Stories Teaching Social Skills (1996) by Carol Gray. Arlington, TX: Future Horizons, Inc.

The Social Story Book (1993) by Carol Gray. Jenison, MI: Jenison Public Schools.

Taming the Recess Jungle: Socially Simplifying Recess for Students with Autism and Related Disorders (1993) by Carol Gray. Jenison, MI: Jenison Public Schools.

The Walker Social Skills Curriculum: The ACCEPTS Program (1988) by Hill M. Walker et al. Austin, TX: Pro-Ed, Inc.

Strategies

Autism–P.D.D.: Introducing Strategies for Parents and Professionals (1995) by Janice I. Adams. Kent Bridge, ON: Adams Publications.

Autism–P.D.D.: More Creative Ideas: From Age Eight to Early Adulthood (1997) by Janice I. Adams. Bloomington, IL: Adams Publications.

Building Bridges Through Sensory Integration (1998) by Ellen Yack, Shirley Sutton and Paula Aquilla. Weston, ON: Authors.

Point…Click…& Learn: A User Friendly Guide to Educational Software Programs for Individuals with Developmental Disabilities (1997) by Camilla K. Hileman. Arlington, TX: Future Horizons, Inc.

"The Sensorimotor Systems: A Framework for Assessment and Intervention" by Winnie Dunn. In Fred P. Orelove and Dick Sobsey, *Educating Children with Multiple Disabilities: A Transdisciplinary Approach* (2nd edition) (Baltimore, MD: Paul H. Brookes Publishing Co., 1991), pp. 33–78.

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